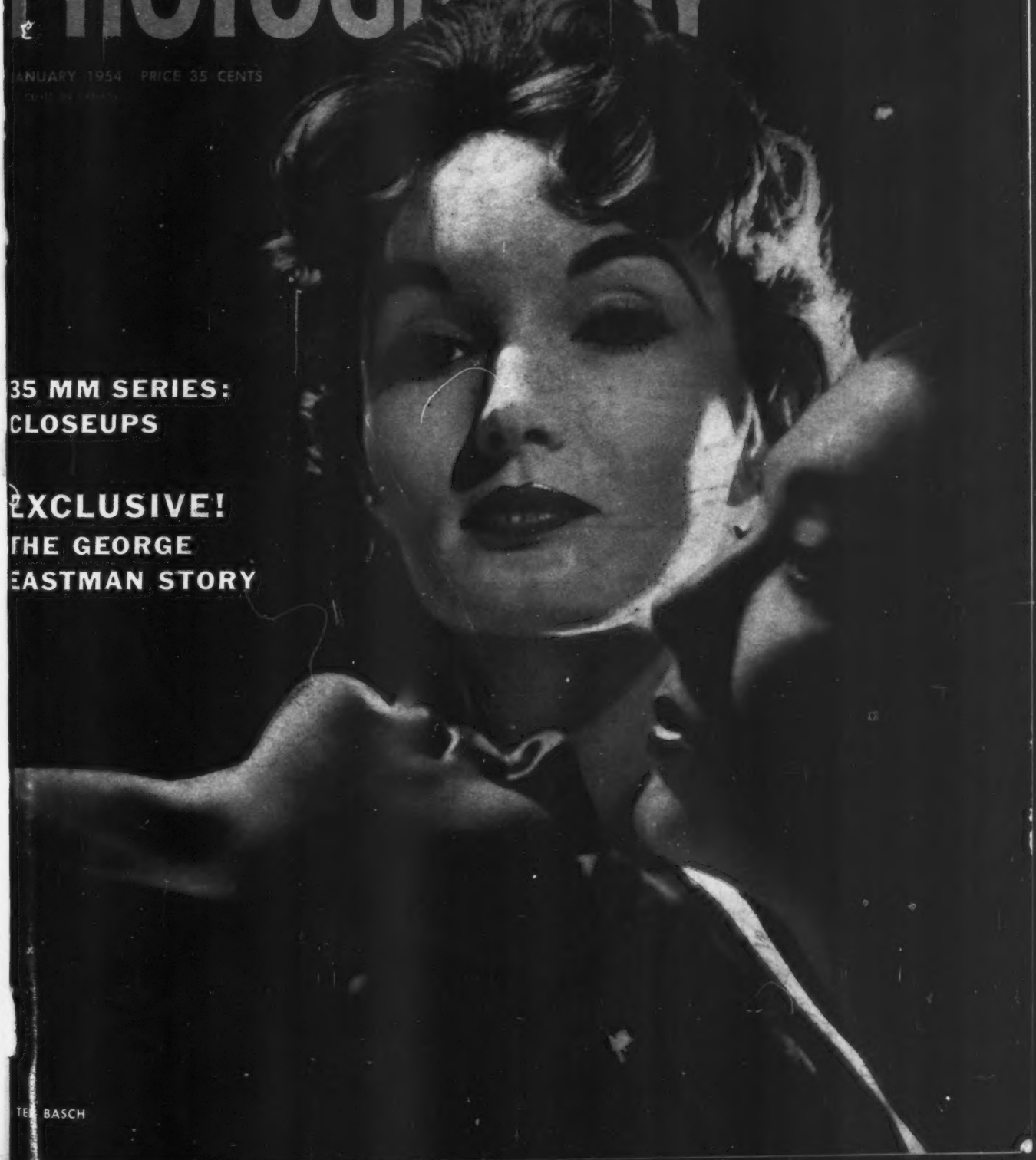
modern PHOTOGRAPHY

HOW TO BUY A SLIDE PROJECTOR

JANUARY 1954 PRICE 35 CENTS



35 MM SERIES: CLOSEUPS

EXCLUSIVE! THE GEORGE EASTMAN STORY

TED BASCH

R v.18 1954

Brilliance and *richness* go together in enlargements on ANSCO CYKORA!

The rare ability of Cykora to record the brilliance and sparkle as well as the subtle gradations of a scene make it the favorite enlarging paper of many successful photographers.

Cykora comes in a good selection of surfaces, and in a choice of evenly spaced contrast grades. For tones of pleasing warmth, develop Cykora in Ansco Ardol. For stronger, more neutral tones, use Ansco Vividol.

You'll find Ansco Cykora Paper and Ansco Developers on sale at photo counters everywhere. Ansco, Binghamton, New York. A Division of General Aniline & Film Corp. *"From Research to Reality."*

People who know buy Ansco

ANSCO VIVIDOL DEVELOPER

This famous laboratory-packed developer produces sparkling prints with rich shadows and excellent middle tones. May also be used for tray development of roll, sheet and pack films. Available in ¼, ½, 1 and 5 gallon sizes.

F.A.

Snapshot in 60 seconds

—WHAT A THRILL AT CHRISTMAS TIME!

SNAP IT! 60 SECONDS LATER... THE FUN BEGINS!

You open your Polaroid Camera, lift out the completely dry, finished print — and break into a bright smile. It's the best picture ever taken of your boy!

HAVE YOU SEEN TODAY'S POLAROID PICTURES?

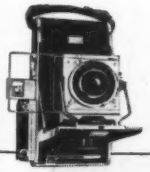
- ★ They're sparkling black and white (3¼" x 4¼") prints — even bigger than this.
- ★ A new plastic finish gives them lasting beauty.
- ★ Every roll of film is guaranteed.*

CAN YOU IMAGINE THE FUN

of admiring that picture with the whole family right there on the spot? Showing it to friends that very day? That's the joy of the most wanted gift of all, the Polaroid Land Camera.

YOU'LL HAVE ENLARGEMENTS AND COPIES MADE

They're made directly from your prints by our special process. They'll come back to you so quickly, cost so little, you'll wonder why you ever kept dusty files of negatives.



A CINCH TO USE!

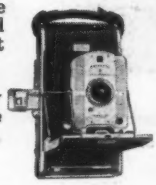
Anyone can make good pictures. To load, just drop in the film. No spools to thread, no knobs to turn. Developing is done without tanks, liquids or fuss.

AND YOU'LL NEVER "MISS" A PICTURE

If the subject moves, or the pose isn't right, you know at once and can shoot the picture again... before a once-in-a-lifetime moment is gone forever.

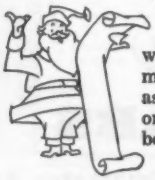
PATHFINDER — f/4.5 lens . . . shutter speeds one to 1/400 sec. . . . coupled rangefinder... aristocrat of 60-second cameras.

MODEL 95 — the thrifty family camera anyone can use indoors or out, rain or shine.



POLAROID® *Land* CAMERAS

Polaroid Corporation, Cambridge 39, Mass.



BET THERE'S SOMEONE ON YOUR CHRISTMAS LIST

who wants a Polaroid Camera more than anything else. If so, ask your photo dealer for a demonstration. It's fun—and you'll be amazed at the high quality of today's one-minute pictures!

**If you're ever dissatisfied with the results from any roll, send the pictures to Polaroid and you'll get a new roll free.*

FREE!

A beautiful "permanent color print album" . . . one of the first really practical ways to show and store your color prints. Designed by Life Color Labs to protect your precious prints. Each frame is an individual mount, and can be removed from the binding . . . prints are not cemented within the frame, will slide in and out easily. Yours Now . . . with each order of only 6 prints of any one size.*

COLOR PRINTS

for as little as 25c each!

Your precious color transparencies, brought vividly to life in full Color Prints. Rush any size transparency to us . . . our highly skilled technicians insure you the best possible reproduction; *the latest electronic equipment even compensates for over and under exposures.*

WALLET SIZE

25¢

2½ x 3½	40c	5 x 7	1.25
3½ x 3½	50c	8 x 10	2.50
3¼ x 4	60c	11 x 14	4.95
4 x 5	75c	16 x 20	10.00

35 MM COLOR DUPLICATES ..... .25

Cropping & Dodging on request .... add 50%

All orders are returned by first class mail insured

No C.O.D. orders, please
Minimum order $1.00

ANSCO and EKTACHROME color rolls developed $1.00 each

This Album Yours Free!

Extra individual blank albums available to hold 6 color prints of the same size ..... only 50c each

WRITE

LIFE *Color* LABS

Dept. M-1, 204 Washington Avenue • Albany, New York

HABER & FINK

THE GREATEST ROUND-UP OF CAMERA BARGAINS IN OUR HISTORY

NOW is the time to buy that Camera or Equipment that you have hesitated to purchase because of your budget. We searched through our vast stock and picked these choice items to offer you at these low-low prices. We urge you to take advantage of these offers, now.
Look them over and Compare!

NOW READY! NEW 1954
H & F PHOTO-FAN
FULL OF BARGAINS
IN CAMERAS & EQUIPMENT
YOURS FREE! WRITE FOR YOUR COPY

BRAND NEW REFLEKTA
2¼ x 2¼ German
REFLEX

- Pololyt f.3.5 coated Lens.
- Built-in Flash synchronization.
- Self erecting self-closing hood.
- Takes Color or Black and White.

ONLY **$29.95**

Leather Carrying Case Additional _____ $4.75
Flash Gun Additional _____ $6.50

SAVE
Brand New
KODAK RETINA IA

CALIBRATED IN FEET
✔ Coated f2.8 Lens
✔ Fully synchro-Compur
✔ Automatic film transport
✔ Double exposure prevention
✔ Automatic depth-of-field indicator
✔ Click stop diaphragm
✔ Speeds—1-500th
✔ Fully Automatic
✔ MX
Your price **79.50**

SAVE 40%

Portable
H-F CRYSTAL BEADED SCREENS
✔ Specially designed Color and Black and White
✔ Sturdy balanced construction
✔ Compact folding for storage

	Reg.	YOUR COST
30" x 40"	13.75	8.95
40" x 40"	15.95	9.95
37" x 50"	19.25	12.95
50" x 50"	21.95	14.95

SAVE 27.60

ARGUS C-3 OUTFIT!
NEW

Camera with F3.5 coated Lens. Flashgun — Case. Reg. $69.50
Telephoto Lens, Sunshade & Filter Holder
3 Filters, 4-36 Exposure Rolls of Black & White Film
Value $102.55 SPECIAL **74.95**

SALE PRICED!
HF BAR LIGHTS

Now you can economically take those indoor pictures that you've always wanted to do.
Two Light Units HF Bar Light, with 2 R 30 Reflector Bulbs
$5.19
Four Light Units HF Bar Light, with 4 Reflector Bulbs
$10.50

Still Camera Values:

	New	Used
Ansco Speedex f 4.5 ctd bif	$36.50	$22.50
Ansco Speedex Special f 4.5, ctd bif	48.85	29.95
Ansco Speedex Special R, f 4.5 bif	57.50	34.95
Ansco Regent 35mm,	54.50	33.50
Kodak Pony 828, f 4.5 ctd bif	31.15	19.95
Kodak Pony 135, f 4.5 ctd bif	35.75	22.95
Kodak Flash Bantam f 4.5 ctd bif	58.00	34.50
Kodak Tourist II, Kodet Lens, ctd bif	26.25	15.95
Kodak Tourist II, Anastar f 6.3 ctd, bif	48.25	29.95
Kodak Tourist II, Anastar f 4.5 ctd, bif	72.85	44.95
Kodak Signet f 3.5 ctd, bif, rf	92.50	58.50
Kodak Medalist II, f 3.5 ctd, bif, rf		149.50
Kodak Reflex II, f 3.5 ctd, bif	181.00	99.50
Kodak Retina IIa, f 2 Xenon, bif, ctd	184.10	104.50
Graflex 22, f 3.5 ctd, bif Century Shutter	94.50	50.50
Graflex 22, f 3.5 ctd, bif Graflex Shutter	119.50	74.50
Ciro 35mm Outfit with camera, case flash	67.50	41.50
Bolsey Model C, f 3.2 ctd, rf	61.50	39.50
Bolsey Model B2, f 3.2 ctd, bif, rf	73.50	48.50
Bolsey Model U22 set-o-matic, ctd, bif	79.50	49.95
Bolsey Threesome, camera, case, flash	79.50	51.50
Canon Model IV-S2, 50mm f 1.8 ctd, bif	295.00	189.50
Canon Model IV-S2, 50mm f 3.5 ctd, bif	250.50	154.50
Ditto 99, f 2.8 Ditter, ctd bif	99.00	59.50

Slide Projectors

	New	Used
TDC Headliner, 200W, Blower cooled 5" Lens	$37.50	$24.50
TDC Show Pak - 300W, Blower cooled, with case	54.50	33.95
TDC Manliner 300, Blower cooled, manual changer	58.50	37.50
TDC Manliner 300, Blower cooled semmatic changer	62.50	39.95
TDC Model D, 300W, Blower cooled, manual changer	68.50	42.50
TDC Model D, 300W, Blower cooled, semmatic changer	69.50	44.50
TDC Streamliner, 500W, Blower cooled, semmatic changer	84.50	54.50
TDC Duo Streamliner 500, 500W, Blower cooled 2x2 and 2¼x2¼	89.50	57.50
TDC Duo Streamliner 300, 300W, Blower cooled, 2¼x2¼ changer only	69.50	44.50

Carrying Cases available at reasonable prices.

SVE Skyline Model 200B, 200W, Blower cooled	39.95	28.50
SVE Skyline Model 300B, 300W, Blower cooled	49.95	32.50
SVE Skyline Model Deluxe, 300W, Blower, f 2.9	59.75	38.50
SVE Skyline Model 500, 500W, Blower, f 2.9	79.50	51.50
SVE Instructor 300, 300W	89.50	59.50
SVE Instructor 500, 500W, Blower cooled	109.50	74.50

Write for Complete Descriptive Literature.

Movie Camera Values:

	New	Used
BELL & HOWELL:		
172B 8mm Magazine Loading with f 2.5 Comat Fixed Focusing	134.95	84.50
f 1.9 Comat Focusing	164.95	104.50
172A 8mm Magazine Loading Turret with f 2.5 Comat Fixed Focusing	164.95	104.50
with f 1.9 Comat Focusing	194.95	119.50
134 V 8mm Roll Loading with f 2.5 Comat Fixed Focusing	89.95	54.50
f 1.9 Comat Focusing	119.95	74.50
134TA 8mm Roll Loading Tri-Lens with f 2.5 Comat Fixed Focusing	129.95	79.50
with f 1.9 Comat Focusing	159.95	99.95
200 16mm Magazine Loading with f 2.5 Comat Fixed Focusing	174.95	117.50
f 1.9 Comat Focusing	199.95	129.95
200T 16mm Magazine Loading Turret with f 2.5 Comat Fixed Focusing	219.95	142.50
with 1.9 Comat Focusing	244.95	169.50
KEYSTONE		
K-29 8mm Roll Loading - Pathfinder	49.95	34.50
K-30 8mm Roll Loading - Capri	59.50	39.95
K-32 8mm Roll Loading - Olympic with f 2.5 Fixed Focusing	79.95	49.50
with f 1.9 Focusing	104.95	64.50
K-41 8mm Magazine Loading - Bel-Air with f 2.5 Fixed Focusing	89.50	59.95
with f 1.9 Focusing	114.50	72.50
A-9 16mm Roll Loading with f 2.5 Fixed Focusing	99.50	59.95
f 1.9 Focusing	129.50	74.50
A-12 16mm Roll Loading Turret with f 2.5 Fixed Focusing	129.50	74.50
with f 1.9 Focusing	159.50	94.50
K-50 16mm Magazine Loading with f 2.5 Fixed Focusing	149.50	87.50
with f 1.9 Focusing	179.50	104.50
REVERE		
8mm ROLL LOADING	New	Used
Model 80 f 2.5 Fixed Focusing	97.50	52.50
Model 83 f 1.9 Focusing	122.50	69.50
Model 84 f 2.5 Fixed Focusing Turret	122.50	69.50
Model 89 f 1.9 Focusing Turret	147.50	84.50
8mm MAGAZINE LOADING		
Model 40 f 2.5 Fixed Focusing	99.50	54.50
Model 41 f 1.9 Focusing	124.50	69.95
Model 61 f 2.5 Fixed Focusing	112.50	64.50
Model 62 f 1.9 Focusing	137.50	77.50
Model 44 f 2.5 Fixed Focusing Turret	129.50	69.95
Model 45 f 1.9 Focusing Turret	154.50	82.50
Model 63 f 2.5 Fixed Focusing Turret	142.50	74.50
Model 64 f 1.9 Focusing Turret	167.50	89.50

Used Enlargers:

	LIST PRICE	USED
Dejur I f4.5, 2¼x3¼, condenser	120.50	84.50
Dejur II ctd4.5, 2¼x3¼, condenser	99.50	84.50
Dejur 4x5, f4.5, condenser	179.50	119.50
Federal 135 f4.5, 35mm condenser	50.00	29.50
Federal 315CL f4.5, 2x3 diffusion	90.00	59.50
Federal 269 f6.3 2¼x3¼	39.75	24.50
Federal 279, f6.3 2¼x3¼, condenser	46.95	29.95
Kodak Hobbyist f6.3, 2x3 coldlite	57.50	39.50
Omega DII ctf4.5, 4x5, condenser	168.50	99.50
Omega B4 2¼ 3¼, condenser	109.50	75.00
Omega E3, 5x7, Autofocus	325.00	214.50
Solar Autofocus ctf4.5, 2¼x3¼, condenser	109.00	74.50

Price Reductions: Brand New Carl Zeiss Cameras

We are currently offering the very latest models of Brand New Carl Zeiss Cameras at tremendous savings. All cameras are factory guaranteed with Import Certificates and a one year H&F and Carl Zeiss Guarantee.

	Was	New
Super Ikonta A, 1⅝"x2¼"	162.00	148.00
Super Ikonta B, 2¼x2¼	236.00	212.00
Super Ikonta BX, 2¼x2¼	281.00	253.00
Super Ikonta C, 2¼x3¼	186.00	168.00
Ikoflex Ia, 2¼x2¼ Novar f 3.5	113.00	97.00
Ikoflex Ia, 2¼x2¼ Tessar f 3.5	140.00	122.00
Ikoflex IIa, 2¼x2¼ Tessar	200.00	169.00
Contessa 35mm f 2.8	214.00	153.00
Contax IIa f 2 Opton Sonnar	444.00	353.00
Contax IIa f 1.5 Opton Sonnar	488.00	383.00
Contax IIIa f 2 Opton Sonnar	480.00	387.00
Contax IIIa f 1.5 Opton Sonnar	534.00	417.00

All Zeiss Accessories are Similarly Reduced —Write for Prices.

SAVE OVER 45%
Brand New
RADIANT All Metal CONTACT PRINTERS

Through a large purchase we are able to offer these fine Contact Printers at a very substantial savings

TROJAN 4x5 PRINTER
• Compact • Adjustable Masks • AC-DC with ruby bulb • Hinged Door • Light weight construction.
List $19.50 SPECIAL $10.95

DE LUXE 4x5 PRINTER
• Masks from 35mm to 4x5
• Hinged Door for Dodging
• Uniform Pressure
• Well Ventilated • Rugged
• AC-DC with ruby bulb
• Speeded Guides for 35mm Printing

List $25.00
SPECIAL $13.95

15 DAY TRIAL WITH MONEY BACK GUARANTEE
ALL PRICES F.O.B. OUR STORE

ONE OF AMERICA'S GREAT CAMERA STORES
HABER & FINK, INC.
BUY WITH CONFIDENCE!

12 WARREN ST
NEW YORK 7
BA 7-5800

MAIL COUPON TODAY

HABER & FINK, INC.
Dept. MP-1 • 12 Warren St., New York 7
☐ Please send me .....
Enclosed . . . Cash ☐ Check ☐ Money Order ☐
☐ Rush your best offer! I want to trade my .....
..... for a .....
☐ Please place my name on your mailing list for FREE literature. Send latest Photo Fan. (Please Print)
NAME .....
ADDRESS .....
CITY ..... STATE .....

MODERN PHOTOGRAPHY (combined with Minicam) is published monthly by the Photography Publishing Corp., 251 Fourth Avenue, New York 10, N. Y. Reentered as Second Class matter at the Post Office at New York, under the Act of March 3, 1879; additional entry at Greenwich, Connecticut. Yearly subscription price is $4.00 in U.S.A. and possessions, $4.50 in Canada, $6.00 in Pan-American Union and Philippines. Elsewhere, $8.00. Single copies 35c; Canada 40c. January, 1954. Vol. 18. No. 1.

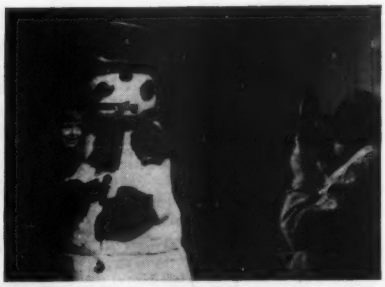
FLASH DAD AND THE CHILDREN—EVERYONE IN THE FAMILY—AGAINST BACKGROUND OF THE TREE

CAPTURE CHRISTMAS

G-E FLASH makes it easy to get all the fun!

Catch Sonny stuffed with turkey, filled with holiday happiness. Handy G-E Flash is "packaged sunlight" for pictures anytime and anywhere.

Shoot the end of the day, too, when "visions of sugar plums dance in their heads." G-E Flash makes it so easy to build up your Family Album.



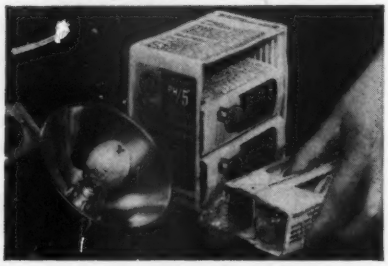
And don't forget shots outdoors at night, to make the story complete. G-E Flash gives great punch of light to capture all the fun.

The secret of getting pictures you love is to put your subjects at ease. Give them something to do . . . a little simple action . . . and then catch them at peak expression with General Electric Flash. It's so easy,—just pop in a G-E Flash bulb, sight, and shoot! You'll make this Christmas and New Years' memorable with pictures.

Get plenty of G-E Flash bulbs ahead of time, so you'll be ready for every shot.

NOW, better flashability

especially in simple cameras! G-E Flash bulbs now have new low-current filament plus new improved primer . . . for smoother, more positive flashing every time, particularly with small-size batteries. Get New G-E Flash bulbs in the handy, easy-to-use 12-8-4 pack today!



GENERAL ELECTRIC

THE MOST **VERSATILE** CAMERAS

IN ALL THE WORLD

Linhof

SUPER TECHNIKA 2¼ x 3¼ · 4 x 5 · 5 x 7

Model 45
Shown with
Multi-Focus
Viewfinder

Model 23

There isn't a single useful feature which has not been included in the Super Technika, and there isn't a single photographic situation which a Super Technika cannot meet and handle. Imagine the extent of control of perspective and depth-of-field made possible by the 'swing' and 'tilt' movements. Visualize the advantages of the triple extension bellows in close-up and telephotography. Note the convenience of the drop-bed for wide angle photography. Consider the revolving back which permits composition selection without disturbing the camera, and the back-interchangeability which allows the use of every type of film. Above all, take into consideration the Multifocus Rangefinder which couples to all lenses, normal, wide angle, and telephoto . . . each of which can be instantly interchanged to suit any given requirement.

These are but a few of the many exciting Linhof-exclusive features which have made Super Technika cameras world famous for their view camera flexibility and press camera handiness. Add these to the impeccable craftsmanship which mark the design and construction of every Super Technika and you have, truly, the most versatile cameras in all the world.

Available at Franchised Dealers.

Write for Free Literature or Send fifty cents for 50-page, 4-color, Linhof Anniversary Booklet.

Sole U.S. Linhof Distributor: KLING PHOTO CORP., 235 Fourth Avenue, New York 3, N. Y. · 7303 Melrose Avenue, Los Angeles 46, Cal.

WHY GUESS WHICH FILTER CORRECTS WHAT LIGHT?

WHEN A HARRISON COLOR ATTACHMENT READS DIRECTLY IN CORRECTION FILTERS!

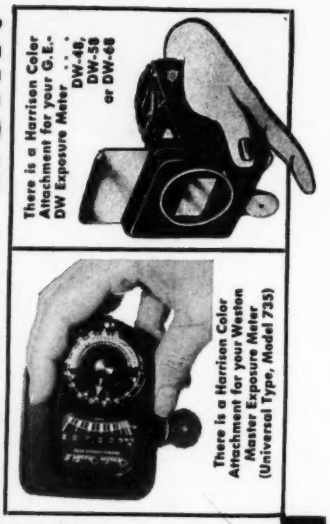
. . . and shows you exactly which one to use for every picture . . . . .

Nothing complicated. No calculations to make. You simply cannot go wrong!

The only requirement is a HARRISON COLOR ATTACHMENT for either WESTON MASTER or your G.E.-DW exposure meter—whichever you happen to own.

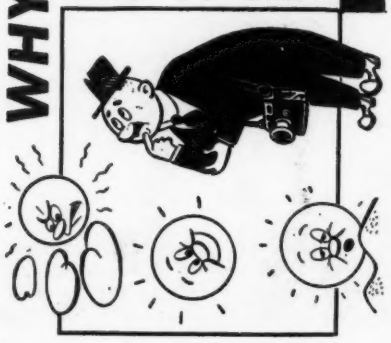
Write for your Free Booklet on the simple story of COLOR CONTROL. . . *Please specify which exposure meter you have.*

6363 Santa Monica Blvd. HARRISON & HARRISON OPTICAL ENGINEERS Hollywood 38, California



There is a Harrison Color Attachment for your G.E.-DW Exposure Meter . . . DW-48, DW-58 or DW-68

There is a Harrison Color Attachment for your Weston Master Exposure Meter (Universal Type, Model 735)



modern PHOTOGRAPHY

JANUARY 1954, VOL. 18, NO. 1

ARTICLES

46 PORTRAITS: DR. HERMAN MOSES' INCISIVE APPROACH ..... *by Stanley H. Brown*

52 HOW TO BUY A SLIDE PROJECTOR ..... *by Charles Hellman*

58 WHY THE BLUR? ..... *by Herbert Keppler*

62 "YOU PRESS THE BUTTON; WE DO THE REST." GEORGE EASTMAN'S LIFE AND WORK ..... *by Cora Alsberg*

66 FOG: FRED LYON'S LOVE LETTER TO SAN FRANCISCO ..... *by Jacquelyn Judge*

74 THREE IN ONE: PETER BASCH SOLVES A COVER PROBLEM

76 CLOSEUPS WITH A 35MM CAMERA ..... *by Norman Rothschild*

92 NEW ROLLEICORD NOW AVAILABLE

MOVIE SECTION

87 DR. CINEMA SAYS: CONFUSED BY SEMANTICS OF CAMERAS, PROJECTORS? MAYBE THIS WILL HELP SET YOU STRAIGHT

88 EDIT BY A YARDSTICK: WHAT IS THE PROPER LENGTH FOR A MOVIE SCENE? ..... *by Ernst Wildi*

90 HE DREW A NATURAL: 8MM HOBBYIST TURNS HIS PROP CAMERA ON JUDY HOLLIDAY ..... *by George Boardman*

DEPARTMENTS

12 COFFEE BREAK WITH THE EDITORS

22 THE LAST WORD: LETTERS FROM OUR READERS

24 NEW PRODUCTS

41 THE CAMERA CLUBS: HOW IS YOUR CAMERA CLUB SPARKING ITS PROGRAM ACTIVITIES? ..... *by Mabel Scacheri*

106 "I TRIED IT MYSELF": PRIZE PICTURES FROM OUR READERS

113 "WHAT'S AHEAD?" REVIEW OF RECENT ADVANCES IN PHOTOGRAPHY

116 MODERN STEREO: WHAT'S WRONG WITH PROFESSIONAL 3-D MOVIES? ..... *by Bart Brooks*

EVERETT GELLERT, *Publisher* AUGUSTUS WOLFMAN, *Editor-in-Chief*
MARTIN E. SIEGEL, *Business Manager*
JACQUELYN JUDGE, *Editor*
JOHN WOLBARST, *Man. Ed.* ARVEL W. AHLERS, *Exec. Ed.*
HERBERT KEPPLER, *Assoc. Man. Ed.* CORA ALSBERG, *Assoc. Ed.*
DOROTHY JACKSON, *Assoc. Ed.* N. M. GROSSMAN, *New Prods.*
ANTHONY PALAGONIA, *Art Asst.* BARBARA LEIGHTON, *Edtl. Asst.*
ERNEST G. SCARFONE, *Art Director*
ROBERT DORIN, *Advtg. Mgr.* MILTON GORBULEW, *Circ. Mgr.*

COPYRIGHT 1953, PHOTOGRAPHY PUBLISHING CORP., 251 FOURTH AVE., NEW YORK 10, N. Y. PHONE: OR 3-9300. CHICAGO OFFICE: 333 N. MICHIGAN BLVD., CHICAGO, ILL. PHONE: ANDOVER 3-7132, 7133. CALIFORNIA OFFICE: 3038 BEVERLY BLVD., LOS ANGELES 57, CALIF.—PHONE: DUNKIRK 8-0613. YEARLY SUBSCRIPTION, $4.00 IN U.S.A. AND POSSESSIONS, $4.50 IN CANADA, $6.00 IN PAN-AMERICAN UNION AND PHILIPPINES. ELSEWHERE, $8.00. SINGLE COPIES, 35c, CANADA, 40c.

Member Audit Bureau of Circulations

TWO REASONS WHY A KALART GIVES YOU BETTER INDOOR PICTURES

$9.95
for cameras with built-in sync

Only a KALART SUPER has both these Essential Features

©1953 The Kalart Company Inc.

Christmas is the day of days to get pictures you'll treasure forever — the children round the tree, the family at dinner, story-telling candids. Now you can take them the easy way. Get a genuine Kalart Super Speed Flash and be sure.

ONLY A KALART SUPER gives you a built-in exposure KAL-Q-LATOR that tells at a glance the correct lens and shutter setting for all flash pictures — with COLOR film or black and white film. Quick. Simple. Certain.

ONLY A KALART SUPER gives you a built-in Test Light that guards against flash failures — wasted flashbulbs — lost pictures. No other flash equipment, regardless of price, gives you so many picture-saving features. Take your camera to your nearest camera dealer and ask to see the new Kalart Super. Models for almost every camera — old or new.

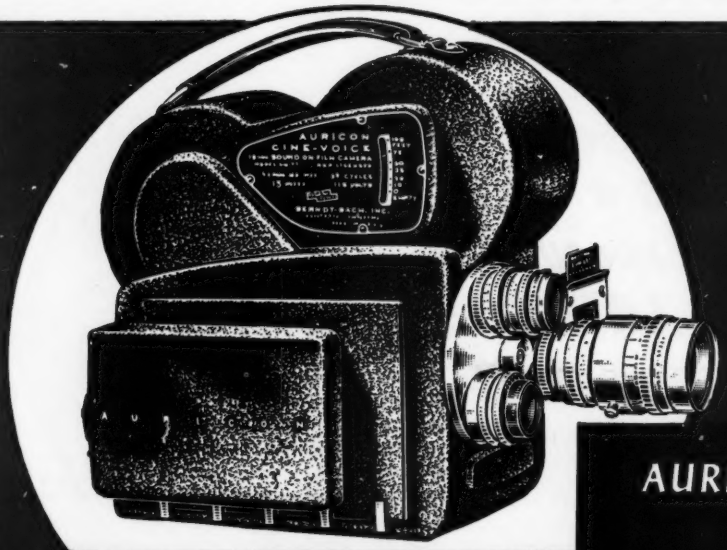
FREE "Helpful Hints on Flash Photography." Pointers for better flash pictures. Mail coupon to Kalart, Plainville, Conn. Dept. C-1.

If you live in Canada, mail coupon to Hughes Owens, Ltd., 103 Princess St., Winnipeg.

KALART

Dowling's FIFTH AVENUE

TRADE IN YOUR PRESENT EQUIPMENT . . . 10% DOWN



AURICON Cine-Voice

FOR ONLY $69.50 DOWN

YOU CAN SHOOT 16MM MOVIES THAT TALK!

What you see in the finder and hear in the headphones, are yours forever on film . . . In natural color or black and white, the Cine-Voice Camera photographs a sound track alongside your picture, on the same film at the same time. Using the Cine-Voice Sound System is as easy as tuning your radio. It takes only a few seconds to place the microphone near your subject and you are making a talking picture! When your film is returned after processing, it will play on any 16mm sound projector perfectly LIP-SYNCHRONIZED. Magnetic stripping is not required, saving you both time and expense. Kodachrome, Ansco Color or black and white films cost the same as the silent types. With the Cine-Voice you get the sound track free! The superb quality of this compact, high fidelity system is attested by the reputation of its manufacturer, Berndt-Bach, Inc., and the wide usage of the Cine-Voice in television and many other professional fields.

Single Lens Model ..... **$695.00 Cash or $69.50 Down**

Turret Model ..... **$784.50 Cash or $78.45 Down**

(Optional) Portable Power Pack ..... **$58.50 Cash or $5.85 Down**

With D. F. A.'s convenient deferred payment plan, the balance, after down payment or trade-in, may be spread over as many as 12 easy monthly installments—beginning one month after you receive your new Cine-Voice!

"NO EXTRAS"* NEEDED
YOU RECEIVE A COMPLETE SOUND FILMING SYSTEM

The Cine-Voice, with 100' film capacity, is furnished as illustrated, in the carrying case, ready to be used with normal household electric current. Included without additional charge are: Microphone, amplifier, headphones, tubes, 50' of microphone cable, carrying case. *Lenses are optional and available at additional cost. Your present "C" mount lenses may be used, or write D. F. A. for lens list. Yes, STYLED RIGHT . . . PRICED RIGHT . . . AT **$695.00 CASH OR ONLY $69.50 DOWN** COMPLETE AND READY TO MAKE HOLLYWOOD QUALITY MOVIES! Whether for home enjoyment or professional use, the Cine-Voice opens a new world of sound pictures!

Auricon-Pro, 200' Film Capacity, $1310.00 Cash or $131.00 Down
Auricon Super-1200, 1200' Film Capacity, $4315.65 Cash or $431.56 Down

Please write Dowling's Fifth Avenue for complete description.

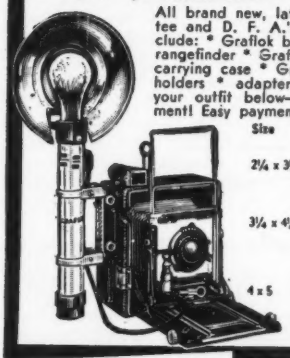
REMEMBER

Dowling's Fifth Avenue complete 1954 catalog is FREE. It's a permanent, ready reference to fine quality still and movie equipment of all types. Please use the coupon to request your copy.

Dowling's FIFTH AVENUE 10% DOWN

- 30 DAY FREE TRIAL
- LIFETIME GUARANTEE
- [illegible]
- [illegible]
- EASY PAYMENTS FOR CIVILIANS AND SERVICEMEN THE WORLD OVER
- NO INTEREST . . . NO EXTRA CHARGE FOR CREDIT.

1954 *Pacemaker* GRAPHIC OUTFITS



All brand new, latest models, with both factory guarantee and D. F. A.'s own Lifetime Guarantee. Outfits include: * Graflok back * Ektalite Screen * Kalart coupled rangefinder * Graflite 3 cell flash gun installed * deluxe carrying case * Graphic film pack adapter * 6 cut film holders * adapter ring * sunshade * 4 filters. Select your outfit below—prices include all this extra equipment! Easy payments available!

Size	Coated Lens in Shutter	Speed Graphic	Crown Graphic
2¼ x 3¼	101mm Ektar f/4.5 (1/800 sec. shutter)	$316.	$276.
	105mm Schneider Xenar f/3.5	326.	286.
	105mm Tessar f/3.5	336.	296.
	105mm Ektar f/3.7	336.	296.
3¼ x 4¼	135mm Schneider Xenar f/4.7	299.	257.
	127mm Ektar f/4.7	309.	267.
	135mm Tessar f/4.5	326.	283.
4 x 5	135mm Schneider Xenar f/4.7	299.	257.
	135mm Optar f/4.7	314.	272.
	127mm Ektar f/4.7	314.	272.
	135mm Tessar f/4.5	329.	286.
	150mm Tessar f/4.5	338.	293.
	150mm Schneider Xenar f/4.5	338.	293.
	152mm Ektar f/4.5	339.	295.
	150mm Tessar f/3.5	396.	352.

1954 Rolleicord Rolleiflex

Dowling's Fifth Avenue—known the world-over as a headquarters for the Rollei photographer—is proud to offer the new Rolleicord IV, Rolleiflex 2.8C and the traditionally fine Rolleiflex f/3.5 cameras. Each of these fully flash synchronized 1954 models is a leader in its class!

Rolleicord IV with coated Schneider Xenar f/3.5 lens in M-X shutter **$149.50 Cash or $14.95 Down**

Rolleiflex with coated Schneider Xenar f/3.5 lens in M-X shutter **$265. Cash or $26.50 Down**

Rolleiflex with coated Zeiss Tessar f/3.5 lens in M-X shutter **$285. Cash or $28.50 Down**

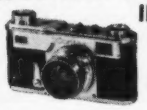
Rolleiflex 2.8C with coated Schneider Xenotar f/2.8 lens in M-X shutter **$385. Cash or $38.50 Down**

Dowling's Fifth Avenue delivers each Rollei as a factory packaged **complete** unit, including dual lens cap, cable release and deluxe leather eveready carrying case . . . . at no extra charge.

Selected Accessories for Use with Your Rollei

Flashflex BC Unit with Battery (illustrated on camera)	$22.95
Plate Back Set	38.27
Rolleikin II 35mm Adapter	35.78
Rolleikin 2.8C	25.80
Rolleinar I or II (f/3.5)	18.49
Rolleiper I or II (f/3.5)	9.85
Rolleinar-par I or II (2.8C)	27.00
Rollei Filters (2.8C)	$ 7.95
Rollei Lens Hood (2.8C)	6.95
Zeiss Duonar 2-X f/5.6 Telephoto Lens with Case	144.00
Rolleigrid Field Lens	4.95
Panorama Head	14.19
Stereo Attachment	13.95
Veigel Exact "66" Enlarger	189.50

1954 CONTAX IIA and IIIA



New lower prices! Contax IIA with Sonnar coated f/2.0 lens **$353. Cash or $35.30 Down**; or with Sonnar coated f/1.5 lens **$383. Cash or $38.30 Down.** For Contax IIIA, with built-in exposure meter, add **$34. Cash or $3.40 Down.**

1954 ZEISS *Contessa 35*

Trustworthy and elegant pocket-companion, weighing only 21 ounces. Coupled rangefinder, built-in exposure meter with ASA scale, renowned Opton Tessar coated f/2.8 lens, fully synchronized Compur Rapid M-X shutter with speeds to 1/500th sec. Now only **$153. Cash or $15.30 Down.**

1954 RETINA IIA

Compact, precise and reliable . . . perfect for travelling light! Full M-X synchronization, rapid film advance lever. With Schneider Xenon coated f/2.0 lens **$149.50 Cash or $14.95 Down.**

1954 *Leica* IIIf

With Leitz registration on both camera and genuine coated Leica lens. With Elmar f/3.5 **$278. Cash or $27.80 Down**; with Summaron f/3.5 **$312. Cash or $31.12 Down**; with new Summicron f/2.0 **$393. Cash or $39.30 Down**; with Summarit f/1.5 **$434. Cash or $43.40 Down.**

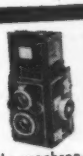
1954 *Exakta* VX

With waist-level finder and pre-set coated lens: With Tessar f/2.8 **$279.50 Cash or $27.95 Down**; with Biotar f/2.0 **$353. Cash or $35.30 Down**; or with Angenieux f/1.5 **$385. Cash or $38.50 Down.** To substitute Penta Prism Rangefinder add **$47. Cash or $4.70 Down.**

3-D HEADQUARTERS!

Revere Stereo Camera (illustrated) with matched coated f/3.5 lenses **$174.50 Cash or $17.45 Down**; **Stereo Realist Camera** with matched coated f/3.5's **$159. Cash or $15.90 Down.** New dual TDC Stereo Project-or-View **$149.50 Cash or $14.95 Down.** Taylor Stereo Table Viewer **$87.50 Cash or $8.75 Down.**

1954 ZEISS IKOFLEX IIa



NOW . . . fully synchronized and with Extrabrite focusing screen. Film winding knob cocks shutter automatically. With Tessar coated f/3.5 lens in Compur M-X shutter at sensationally reduced price: **$169. Cash or $16.90 Down.**

1954 KODAK CHEVRON

Popular 2¼ X 2¼ size. Combined eye-level viewfinder-rangefinder, with parallax correction; rapid film advance lever; automatic film stop. Equipped with needle-sharp Ektar coated f/3.5 lens in Synchro-Rapid "800" shutter (10 speeds from 1 sec. to 1/800th sec.). **$215. Cash or $21.50 Down.**

1954 HASSELBLAD

Superlative 2¼ X 2¼ single lens reflex with crisp Ektar coated f/2.8 lens. Model "1000-F" speeds to 1/1000th sec. **$399.50 Cash or $39.95 Down.** Model "1600-F" speeds to 1/1600th sec. **$499.50 Cash or $49.95 Down.**

1954 POLAROID *Land* Cameras

Exciting new Pathfinder, model "110" with coupled rangefinder and coated Wollensak lens in Rapax shutter **$249.50 Cash or $24.95 Down.** Polaroid, model "95" **$89.75 Cash or $8.97 Down.**

1954 ELECTRONIC FLASH UNITS

Sun-Lite II battery-pack unit **$79.50 Cash or $7.95 Down**; new **Sun-Lite II Pocket-Pak** unit **$89.50 Cash or $8.95 Down.** Latest **Heiland Strobonar V** dry cell unit **$119.50 Cash or $11.95 Down**; **Strobonar III $189.50 Cash or $18.95 Down**; **Strobonar IV $369.50 Cash or $36.95 Down.**

1954 Bolex H-16 De Luxe

Complete with Octameter and 3 top Kern coated lenses: Switar 1" f/1.4, Yvar 16mm f/2.8 and Yvar 75mm f/2.8 — plus compartment case **$712.50 Cash or $71.25 Down.** Bolex H-16 Leader with Lytar coated 1" f/1.9 lens **$299.50 Cash or $29.95 Down.** Request **free Bolex catalog!**

ALL EQUIPMENT LISTED IS BRAND NEW—FACTORY PACKED. OUR STOCKS OF BOTH USED AND NEW EQUIPMENT ARE HOWEVER MOST EXTENSIVE. PLEASE WRITE FOR ANYTHING PHOTOGRAPHIC.

Dowling's

175 FIFTH AVENUE, NEW YORK 10, N. Y.
in a N. Y. Landmark, the Flatiron Bldg. at 23rd St.
Mail Order Showroom, Suite 1604. Tel.: ORegon 4-6275

Dept. MP-154

Please ship the following immediately:.....

.....

Enclosed is $..... ☐ Down Payment ☐ Complete Payment.

I agree to pay $.....monthly for.....months until merchandise is paid for.

I wish to trade in:.....

☐ Give me tentative allowance by mail.
☐ I am shipping equipment for exact allowance.

Your trade-in may be used as down payment! It will be returned at D.F.A.'s expense if you don't accept our top offer.

☐ Send FREE literature on.....
☐ Send FREE 1954 Catalog. ☐ Send pamphlet on "Deferred Payments."

Name.....

Address.....

City or Town.....State.....

MAIL TODAY

FRESH FILM AT SAVINGS!

SAVE COLOR FILM

Fresh 1954 dated, factory-packed, sealed film guaranteed by the manufacturer!

Daylight or Tungsten. Price includes processing, and mounting (35mm) by manufacturer. *Sent postpaid.*

Size	Kodachrome	McGregor
8mm x 25' dbl roll	$3.31	$ 2.85
16mm x 50' Mag	6.05	—
16mm x 100' roll	8.95	7.49
35mm, 20 Expos	2.97	2.09
	3 for 8.85	3 for 5.98
35mm, 36 Expos	4.50	—
K335, Stereo, 20 Exp	3.87	—

SPECIAL

Below Wholesale Prices!

McGREGOR

35MM COLOR FILM

Fresh, 1954 film. Original factory-packed & sealed. Daylight or Tungsten. Processing and mounting by McGregor included.

3 ROLLS 36 EXP. $7.50

This nationally famous film is sold & advertised at $3.95 each! Limited Supply—Only 6 to a customer.

(Offer expires Dec. 31, 1953)

SAVE FRESH 1954 35mm SAFETY FILM

Cut from factory-packed 1000' rolls. Used for finest quality pictures by discriminating amateurs. KODAK PLUS-X, SUPER-X DUPONT #2 and #3. Include 25c postage 2.79

35mm B & W RELOADS. Plus-X or Super-X. From fresh 1955 full rolls. In metal cartridges. Sent postpaid. 20-EXPOSURES, 3 FOR $1.10

SAVE 35mm ANSCO COLOR

1954 Dated, Day or Tungsten

28' BULK. Factory packed, sealed. Frame-numbered notched, ready for loading into 8 20-Exposure cartridges. Sent postpaid $8.49

RELOADS. You can be sure with these FRESH reloads. Sent postpaid. Now—3 for $3.75. Each $1.39

16mm ANSCO COLOR MAGS—loaded with 1953 stock. Limited supply, guaranteed 4.50

SAVE 35mm x 100' SAFETY FILM

Original factory-packed and sealed June 1952 date, guaranteed! *DuPont Superior #3 or Kodak Super X.* Include 25c postage 2.29

SAVE ★★★★ SPECIALS!

35mm x 50' KOD. SUPER-X. Unbeatable value! 1953 dating. Sent postpaid. 1.59

NOW—SHOOT PIX AT "JET" SPEED!

35mm x 100' Roll. ASA 200. From U. S. Gov't Refrigeration vaults. 100% guarantee. Sent postpaid 2.25

NEW SUPPLY ON HAND!

16mm x 100' ANSCO Black & White Film. Fine Grain. ASA50. 1954 dating. Original factory pack, sealed. 48-hr. process. Included (7.49 Value) 3 for 9.95 3.49

16mm x 100' Black & White Rolls

Factory packed, sealed. Processing by world famous mfr. included. 1953-54 dating. Speeds 24 & 12. Limited Supply 2.50

SAVE 35mm AERO EKTACHROME

A HIGH SPEED ASA40 Color Film, made by E.K. for our Armed Forces. Heretofore not available. Short-dated but guaranteed. SENT POSTPAID. 35mm x 40' BULK. Enough for twelve 20-Exposure cart'ges. (NO processing) Large Rolls & Process Kits available. Prices on request. 6.95

Unusual Pictures!

35mm INFRA-RED FILM

Late 1953 dated. 75' ROLL $1.29

35mm ANSCO COLOR

Day or Tung. Original factory sealed. 1954 dated. 112' ROLLS $29.95

We welcome inquiries from Exporters

GARTEL PHOTO SUPPLY COMPANY

MAIL ORDER DIVISION

2527 Tilden Ave., Brooklyn 26, N. Y.

COFFEE BREAK with the editors

THIS MONTH'S COVER • • •

Photographer Peter Basch, who appears on our pages frequently, is responsible for the current cover. Details on how the assignment began, the problems he was faced with and how he solved them, will be found on *pages 74-75,* together with black-and-white reproductions of some of the rejected ideas.

EVERY DOG HAS HIS • • •

If one of the favorite members of your household is also a member of the canine world, he may be interested in hearing about the Gaines Dog Research Center's 1953 dog photo contest.

This year's contest, judged by Jacob Deschin, Camera Editor of the *New York Times;* Sey Chassler, Associate Editor of *Collier's;* and Herbert Keppler, Associate Managing Editor of MODERN PHOTOGRAPHY, was far above most contests in quality of pictures entered.

May Mirin's top dog.

All three winners were amateurs. First prize of $500, Morris Jaffe, New York City; Second prize of $250, May Mirin, New York City; Third prize of $100 to Col. Henry C. Coles, Santa Barbara, Calif. The judges looked for human interest as well as technical quality, as you can tell by a peek at May Mirin's charming winner.

If you're interested in getting a free booklet which will help improve your pictures of Fido, Gaines will send you an excellent little publication called *Picture Your Dog.* Just write to the Gaines Dog Research Center, 250 Park Ave., New York 17, N. Y .

GIANT IN PHOTOGRAPHY • • •

Each American industry has a giant. In automobiles, Ford. In electricity, Edison. In photography, George Eastman. In the tradition of the biographical articles we have done in the past—Daguerre, Fox Talbot, etc., we are presenting this month, the first of a two-part series on George Eastman, beginning on *page 62.* The first article deals largely with Eastman's contributions to photography. The second with Eastman, the man.

Credit for behind the scenes help in preparing the first article should go to three men: Gen. Oscar N. Solbert, Director of George Eastman House; Beaumont Newhall, Curator of George Eastman House; Dr. C. E. Kenneth Mees, Director of Research Dept. and Assistant Vice-Pres. of the Eastman Kodak Co.

Eastman House, former residence of George Eastman, is one of the country's finest photographic museums and has the most complete set of documents, pictures and equipment relating to George Eastman's life and work. MODERN's editors were given free access to this wealth of material and great help in finding our way through it. Technical assistance came from Dr. Mees, who has been with the company since 1912.

THE WORLD AT WORK • • •

Helping Man's Progress, Informal Diplomacy, Meeting Coverage, World Problems, Personalities, Pattern for Peace. These were the broad headings under which were grouped several dozen remarkable UN photographs on exhibition at The Camera Club, in New York, during late October and early November.

The show, representing official coverage of UN activities—at headquarters and in the field—was a completely visual presentation. Only the photographer's name appeared on each print, a not entirely successful attempt to let the photograph speak for itself without the benefit of an identifying caption. What one guessed to be a medic aiding refugees turned out to be a mediator interrogating Greek villagers. This would lead to the conviction that the visual scene and the written word cannot always be separated.

But the scope, the sensitivity of the photographs were impressive. You *felt* the workings of UN, and reacted to the studied faces in the delegates' lounge or of workers dealing out injections and technical advice in far reaches of the world. Hung in a large area, the pictures, of sizable dimensions, held the observer's attention—and respect.

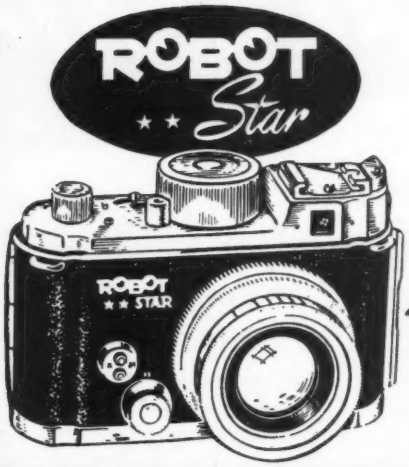
Al Fox and Maria Bordy did some of the best work at UN headquarters, while Eric Schwab, Griff Davis, Leon Matiz, and Alfred Wagg did excellent photo reporting from abroad. Bedrich Grunzwe.g's semi-abstract studies of architectural aspects of UN headquarters were outstanding in that group. As part of the show there was also a small group of photographs of the UN in New York, by members of The Camera Club.

The exhibit, the first of its kind, was instigated by UN, and was a joint effort of UN and The Camera Club. It was directed by the photo section of UN Department of Public Information

(*Continued on page 18*)

SENSATIONAL SALE!

EXCLUSIVE AT MINIFILM...



NOW EQUIPPED WITH BUILT-IN REWIND TO TAKE STANDARD 35mm CARTRIDGES!

MOTORIZED FOR SEQUENCE AND REMOTE CONTROL PHOTOGRAPHY

Minifilm Exclusive

BRAND NEW **ROBOT-STAR WITH f1.9** **127.50** *Reg. 249.50*

COATED XENON LENS, CLICK STOPS

BRAND NEW **ROBOT-STAR** **99.50** *Reg. 217.50*

With f2.8 Coated Xenar Lens, Click Stops.

Only ROBOT-STAR provides ALL these Advantages:

- ★ **One motor winding gives up to 24 exposures in sequence**
- ★ **Automatic film winding prevents double exposure.**
- ★ **Rotating shutter controls speeds from ½ to 1/500 second.**
- ★ **Equipped to take standard 35mm cartridge.**
- ★ **Rewinding mechanism returns film to cartridge.**
- ★ **Interchangeable Wide-Angle and Telephoto lenses.**
- ★ **Full Internal MX Flash Synchronization.**
- ★ **Supplied with Registration and import Certificate.**
- ★ **MINIFILM's famous 2 year Guarantee.**

BRAND NEW ACCESSORIES:	REG.	MINIFILM'S PRICE
Eveready Case for ROBOT-STAR	13.50	9.95
30mm f3.5 Schneider Xenagon Wide Angle	99.50	69.50
75mm f3.8 Schneider Xenar Telephoto	110.50	79.50
150mm f4.5 Schneider Xenar Telephoto	157.50	99.50

ATTENTION:

DO NOT confuse with discontinued, converted pre-war ROBOT-CAMERAS with deceiving designations. The Genuine ROBOT-STAR has *never* been offered Brand New for less than 249.50 with f1.9 Xenon Coated Lens, or 217.50 with f2.8 Xenon Coated Lens.

ONLY 10% DOWN

MINIFILM CAMERA CORP.

Where Customers Become Friends

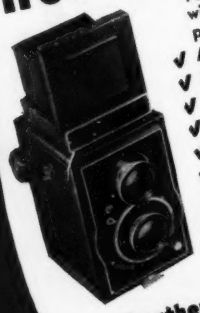
1190 AVENUE OF THE AMERICAS · NEW YORK 36, N. Y.

(bet. 46th & 47th Sts.) JUdson 2-1416

make your Christmas Gifting easier!

Minifilm WILL PLAY SANTA

HOLIDAY SPECIAL



Famous German Precision Reflex with quality features unbelievably priced. (Check them)

- ✓ All metal construction
- ✓ Matched f3.5 coated lens
- ✓ Synchro flash shutter
- ✓ Fingertip focusing lever
- ✓ Graduated in feet
- ✓ Depth of field chart

HOLIDAY PRICED Brand New **$24.50**

Leather eveready case only 3.95

NOW...you can own a BRAND NEW LEICA (latest model)

W/f2.9 famous make German lens in foc. mt., cpld to RF.....ONLY **$73.75**

Newest Model If w/speeds 1/25 to 1/500, and B Synchronized for flash and Strobe (If Body only $64.80) Latest Model IIf cpld to RF. Red Synchro Dial Strobe and flash Synchronized. W/ famous make f2.9 lens.....ONLY **$139.95**

(IIf Body Only $131.00) Latest Model Leica IIIf, speeds from 1 to 1/1000 sec., Red Synchro dial, ASA Speeds, Cpld to RF, Strobe and Flash Synch.....ONLY **$218.95**

(IIIf Body Only $210.00)

COMPLETE LINE OF ACCESSORIES IN STOCK.

NEW ARGUS C3 OUTFIT SAVE $22.60

ALL BRAND NEW

List Price		Comb. Price
$ 69.50	Camera, Case, Flash	$69.50
19.95	Telephoto Lens	10.45
2.75	Sunshade and Filter Holder	
8.25	3 Filters	
5.10	4 36 Exposure Black & White Films	
$102.55		$79.95

USED KODAK SIGNET 35mm CAMERA

with cpld Rfdr, F3.5 ctd. Ektar lens synchro shutter.

List .....$92.50 only **57.00** Used

Eveready Case 7.50

Flashgun 6.95

Enliven Your Party with Polaroid Land CAMERA

Use a Polaroid Land Camera. Finished prints in 60 secs. **55.50** Used

New Polaroid Flashgun	$11.00
Close-up Kit	8.95
Polaroid Film, 8 exp.	1.75
Filter Kit	3.95
Polaroid Exp. Meter	14.25
Camera Case	14.95
Master Compartment Case	39.75

Used Pathfinder F 4.5, X-M., Rfdr. (Reg. $249.50) Only $169.00

3-D ON THE MARCH own the camera of the Future!

STEREO REALIST or REVERE STEREO

W/F3.5 coated lenses Double Exp. Prevention

ONLY **98.50** Used

Leica, Contax, etc.

	New	Used	Trade-In
Leica IIIA, f2 Summar		124.00	90.00
Leica IIIC f2 Summitar ¢		168.00	135.00
Contax II f2 Sonnar		119.50	90.00
Contax III f1.5 Sonnar		149.00	110.00
Contax D, f2 Biotar ¢*		175.00	145.00
Pentacon f2 Biotar PS ¢*	269.00	199.00	160.00
Canon IV S F 1.8 Serenar ¢*	295.00	189.00	155.00
Nikon F 2 Nikkor ¢*	288.50	179.00	135.00
Nikon F 1.4 Nikkor ¢*	379.50	219.00	170.00
Kine Exakta I F 3.5 Tessar ¢*		84.50	65.00
Kine Exakta VX, F 2 ctd Biotar	353.00	236.00	190.00

Lenses & accessories

28mm f6.3 Hektor	102.00	68.00	50.00
35mm f3.5 Elmar ¢		52.00	35.00
35mm f3.5 Summaron ¢	102.00	67.00	50.00
50mm f3.5 Elmar	68.00	32.00	22.00
50mm f2 Summitar ¢	158.00	84.00	60.00
50mm f2 Summicron	183.00	124.00	100.00
50mm f5 Summarit ¢	224.40	129.00	110.00
85mm f1.5 Summarex ¢	442.00	198.00	160.00
90mm f4 Elmar Chr. ¢	98.00	64.00	50.00
135mm f4.5 Hektor Chr. ¢	150.00	107.00	80.00
35mm f2.8 Biometer ¢		119.00	90.00
35mm f2.8 Biogon (IIA) ¢	211.00	129.00	100.00
85mm f2 Sonnar ¢	251.00	118.00	110.00
135mm f4.5 Sonnar ¢	150.00	94.00	75.00

35MM Cameras

Alpa Reflex f1.9 Xenon	449.00	229.00	140.00
Argus 21 f3.5 ctd ¢*	59.50	31.00	22.00
Argus C-3, case, flash R ¢	69.50	39.00	32.00
Argus C-4 camera ¢*	89.50	59.00	45.00
Bolsey B2 f3.2 R.F. * flash cc	79.50	54.00	34.00
Bolsey C f3.2 Reflex ¢*	109.50	63.00	50.00
Clarus f2.8 RF ¢*	118.50	52.50	37.00
Contessa f2.8 RF ¢*	204.00	98.50	74.00
Exa f2.9 Reflex ¢*	89.50	59.00	50.00
Argus C-4 camera ¢*	89.50	59.50	45.00
Minox III f3.5 ¢	123.00	89.00	70.00
Voigtlander Vito II f3.5 ¢*	54.50	33.00	22.00
Mercury II f2.7 ¢*		21.50	16.00
Auto Retina IIA f2 ¢*	153.00	98.50	75.00

Brand New 4x5 PACEMAKER

Crown-Graphic Outfit!

Complete with Kalart Cpld Rfdr 135mm f4.7 ctd Schneider Xenar in (M X) Synchro Compur Shutter Graflok Back Heiland Flash. 1 CFH

184.50

ALL BRAND NEW Completely Installed

Pacemaker Speed Graphic Outfit equipped as above. 209.50

2¼x3¼ cameras w. 105mm f4.5 Xenar equipped as above. $10.00 additional.

Slide Projector PARADE!

Golde Manumatic, 300w, Blower. Reg. $58.50.....Only $33.00

T.D.C. Showpak, 300 w, blower, cc, Reg. $54.50. Used Only $34.00

T.D.C. Mainliner, 300 w, blower, with selectron. Reg. $62.50. Used Only $36.50

Labelle "500" Proj. 500 w. Auto. Feed Blower cooled. Reg. $95.00.....Used Only $52.00

NOW . . . A ROLLEI FOR ALL!

Used Auto Rolleiflex III. F3.5 Xenar. . . . . .Only **$158.00**

Used Auto Rolleiflex III, f3.5 ctd. Tessar, MX. Only **$176.00**

Used Auto Rolleiflex 2-8C, f2.8 ctd. Xenotar, MX. . . . . .Only **$257.00**

MINIFILM CAMERA CORPORATION

1190 AVENUE OF THE AMERICAS • NEW YORK CITY 36

(bet. 46th and 47th Streets) • JU 2-1416

Prompt Free appraisal and Quotation will be gladly rushed to you by return mail. Mail Orders promptly filled. Paid or C.O.D., F.O.B. New York. Note: On C.O.D. Kindly include 10% Deposit on Order. Include Postage. Prices Subject to change.

you can buy THAT CAMERA NOW under MINIFILM'S TIME PAYMENT PLAN — with just 10% Down.

FOR YOU

30 Day FREE Trial Period

2 FULL YEAR Guarantee

BRAND NEW ENLARGERS

Federal 135 w/f4.5 lens. Reg. $49.95. Spec. $37.50
Federal 269 w/f6.3 lens. Reg. $39.75. Spec. $29.50
Federal 269CL w/f6.3 lens. Reg. $53.00. Spec. $39.50
Federal 315CLw/f4.5 lens. Reg. $80.00. Spec. $57.75
Federal 450 CLw/f4.5 lens. Reg. $114.75. Spec. $82.25
New Federal Model 240, Store-Away: 2¼x3¼ w. Lens and case, only $19.95
Arnold D w/f4.5 Lens ..... 79.50—59.50

8MM Movie Cameras— Recommended By Minifilm

Used Revere 88, f2.5 ctd. $37.50
Used Revere B63 Mag. Turret. f2.8 ..... 82.00
Used Revere 44 Mag. Turret, f1.9 ..... 87.00
Used B & H Auto 8 Mag. f2.5 ..... 83.00
Used B & H Tri-Lens 8, f2.5 ..... 79.50

VALUES IN 8mm PROJECTORS!

Used Revere Deluxe Projector, Model 85. 500w. Reg. $124.50. Only **$63.00**

Used Revere 90 Projector, 750w. W. WA. Lens, Case. Reg. $159.50. Only **$89.50**

Used DeJur 750 Projector. 750w, CC. Reg. $159.00. Only **$86.50**

Used B. & H. Regent Projector. 500w Reg. $164.00. Only **$112.00**

DON'T BE WITHOUT AN EXPOSURE METER

USED VALUES

Weston Master II Meter $16.95
Norwood Director 18.50
GE DW 68 ..... 11.95
GE PRI 18.50
DeJur 5B 8.50

GENUINE PRAKTICA FX

Latest 1954 Series!
Reg. 99.50 w/ f2.8 Wetzlar
SPECIAL $68.50
Reg. 220.00 w/ f2 Biotar Preset .....
SPECIAL $149.50
Eveready case 8.50

Reflex Cameras

	New	Used	Trade-In
Ciroflex D f3.5 ¢*	59.95	48.00	36.00
Ciroflex E, f3.5 ¢*		68.00	55.00
Flexaret f3.5 ¢*	99.88	69.00	50.00
Graflex 22 f3.2 ¢*	94.50	62.00	55.00
Super D Graflex 45 ¢*	279.50	179.00	130.00
Rolleicord III f3.5 Xenar ¢*		89.50	75.00
Rolleicord IV f3.5 Xenar M-X ¢*	131.45		85.00
Auto Rolleiflex III f3.5 Tessar M-X ¢*	264.90	176.00	160.00
Auto Rolleiflex III f3.5 Xenar M-X ¢	244.90	158.00	140.00
Auto Rolleiflex 2.8c, f2.8 Xenotar ¢*	359.65	257.00	210.00
Hasselblad f2.8 Ektar ¢*	499.50	285.00	210.00

Slide Projectors

Ampromatic 500W Automat cc SPECIAL	62.00		35.00
Argus 300 W, blower, cc	49.95	34.00	25.00
Golde Coronet 200 W. cc	44.75	28.00	20.00
Kodak Merit, 150W	26.10	19.50	12.00
Kodak Highlux 300 W. blower	56.50		28.00
Kodak Table Viewer 4X	37.50	27.00	20.00
La Belle 75, 500 W Remote Control	154.95		75.00
SVE B 300 W blower	52.45	29.00	24.00
TDC Stereo 2 (500) W lamps	175.50	115.00	90.00
TDC Duo 300, 242, 2¼ Sq.	69.50	41.00	33.00
Viewlex V 33 300 W blower	59.95	34.00	25.00

Roll Film & Press

Kodak Medalist I f3.5 ¢*		78.00	60.00
Kodak Medalist II f3.5 ¢	304.75	148.00	125.00
Super Ikonta B f2.8 Tessar MX¢*	212.00	149.00	100.00
Super Ikonta BX f2.8 Tessar MX ¢*	253.00	168.00	120.00
Voigtlander Rfdr. Bessa II f3.5 MX *	124.50	79.95	60.00
23 Anniversary Speed f4.7 RF		99.00	75.00
34 Anniversary Speed f4.7 RF		94.50	70.00
23 Linhof 3 lenses	575.00	374.00	300.00
45 Linhof f4.5 RF	419.70	290.00	210.00

8MM Cameras & Projectors

Revere 84 Turret f2.8	122.50	71.00	58.00
Revere 40 Mag. f2.5	99.50	58.00	45.00
Revere B 61 Mag. f1.9	137.50	80.00	65.00
Keystone Olympic f2.5	78.00	44.50	34.00
Keystone Mag. Bel Air f1.9	114.50	74.00	58.00
Bolex H-8 Leader f1.9	291.50	179.00	145.00
DeJur Citation f1.9	89.50	59.00	46.00
DeJur Embassy Mag. f2.5	106.95	67.00	55.00
Kodak Brownie f2.7	39.75	27.00	18.00
Kodak Reliant f2.7	89.50	59.00	45.00
Kodak Mag. 8 f1.9	160.00	105.00	80.00
Bell & Howell Sportster f1.9	119.95	79.00	65.00
Bell & Howell Mag. f2.5	134.95	82.50	69.00
Bell & Howell 221	99.95	60.75	45.00
Keystone K 66 750W and case	127.50	73.50	60.00
Keystone K-70 500, c.c.	79.90	53.00	40.00
Keystone K80 500 cc	99.95	65.00	50.00
Kodascope Eight 71 A	111.80	78.00	60.00

16MM Cameras & Projectors

Revere Mag. f2.5	157.50	78.00	60.00
Keystone A-12 f1.9	159.50	93.00	60.00
Bell & Howell 200 Mag. f2.5	174.95	118.00	95.00
Bell & Howell 200 T Mag. Turret f1.9	244.95	167.00	125.00
Bell & Howell 70 DL f1.9	365.50	238.00	190.00
Pathe Super 16 f1.9	489.00	289.00	215.00
Auricon Cine Voice	695.00	495.00	400.00
Bolex H 16 Leader f1.9	299.50	182.00	150.00
Revere 48 and case	182.50	96.00	80.00
Keystone A 82 and case	139.50	78.00	60.00
Bell & Howell 273 A and case	199.95	129.00	100.00
Revere Sound and case	325.00	186.00	155.00
Kodak Pageant	400.00	249.00	190.00
Bell & Howell 285 B-I	514.95	348.00	250.00

¢ Coated, * Flash Sync., L.N. Like New

Popular Used Lenses For Exakta Contax S* Praktica

35mm f2.5 Retrofocus W.A. $63.00
58mm F2 Biotar Pre set lens 89.50
75mm F1.5 Biotar Tele ¢ 128.00
90mm F1.8 Angenieux ¢ 107.00
135mm F4.5 Xenar ¢ 39.00
135mm F4 Triotar ¢ 54.00
180mm Tele Xenar F5.5 ¢ ..... $ 56.00
400mm f5.5 Tele Magor 139.50

Complete Your Exakta Contax S Pentacon Praktica

B.N. PRISM FINDER for Kine V or VX ..... Only $29.95
B.N. 135mm F3.8 ctd. Sun lens for Kine V or VX with FREE PRISM FINDER. ..... Only $69.95
FREE PRISM FINDER for Praktica or Free Bellowscope! with purchase of any of the below described Brand New lenses.
90mm F4 Sun Tele lens $46.75
90mm F4 Sun Tele lens, Pre-set $58.50
135mm F3.8 Sun Tele lens $59.95
135mm F3.8 Sun Tele lens, Pre-set $67.50
135MM F3.5 Colinar, P.S. $76.50

USED LEICA IIIF

1 sec. to 1/1000, fully synch.

199

w/F2 Summitar lens
W/L.N. F2 Summicron lens $239.00
W/L.N. F1.5 Summarit lens $249.00

KINE EXAKTA VX

single lens reflex camera, synchronized for flash and strobe, latest model, with F 2 Biotar lens in pre-set diaphragm.

Reg. $353.30
SPECIAL **234.00**

USED PENTACON CAMERA

35mm single lens reflex w/F2 T ctd. Zeiss Biotar Lens, Flash synchro, built-in eye level prism finder.

Save $160.00
only **174.50** Used
Reg. $359.50
W. Pre-Set 199.50

Special Buy! Exclusive at MINIFILM

Reg. $99.50
Famous 35MM Edinex III Camera with COUPLED RANGEFINDER with F 2 world famous coated lens; Compur Rapid synchro.
Only **$64.50**
Same, equipped with F 2.8 Edinar lens $49.50
B.C. Flashgun $6.85
Carrying Case $4.95

MINIFILM CAMERA CORPORATION

1190 AVENUE OF THE AMERICAS • NEW YORK CITY 36
(bet. 46th and 47th Streets) • JU 2-1416

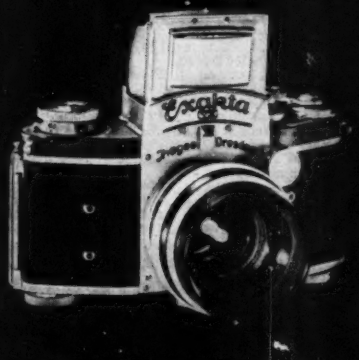
ONLY 10% DOWN!

THE EXAKTA SYSTEM

has more to offer you than you ever expected from a camera

The Exakta System offers you greatest photographic versatility

When a serious photographer attains his objective—owning an Exakta VX—he has the most versatile camera in the world. With it he can photograph a subject as far as the moon or as near as a microbe. Each lens and accessory that he adds extends the camera's versatility without requiring auxiliary equipment. So, owning an Exakta VX is more than just picture taking. It's an exciting venture called Exakta Photography. It's exploring a revolutionary system of photography, the single-lens reflex system, that gives you perfect assurance you will get the exact picture you see in the viewfinder. It means photo satisfaction, pictures you will show with pride. We invite you to visit your dealer today and ask him to show you the Exakta VX and any of the equipment shown above or to write to us for more information.



The Exakta VX is available with

50-mm., f 1.5 Angenieux preset S21	$385.00
with Penta Prism & split-image finder	$442.00
50-mm., f 2.8 Zeiss preset Tessar	$279.80
with Penta Prism & split-image finder	$336.80
58-mm., f 1.9 Meyer preset Primoplan	$289.50
with Penta Prism & split-image finder	$346.50
50-mm., f 1.9 Schneider Xenon	$299.50
with Penta Prism & split-image finder	$356.50
58-mm., f 2 Zeiss preset Biotar	$353.30
with Penta Prism & split-image finder	$400.00

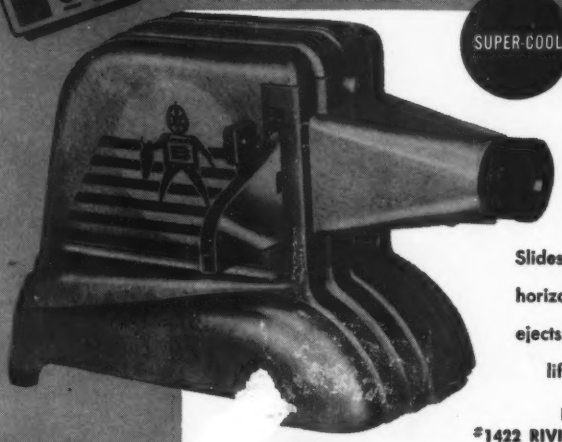
EXAKTA CAMERA COMPANY

General Office: 705 Bronx River Rd., Bronxville 8, N. Y.
Showroom: 46 West 29th St., New York 1, N. Y.

HERE'S THE PROJECTOR THAT TAKES

all three

35mm, 2¾", stereo binders



SUPER-COOL

BRUMBERGER
SLIDE PROJECTOR

#1405 FLEETWOOD *300 Watt, Blower-Cooled*

Slides last longer, handle easier in this super-cool beauty! Vertical and horizontal tilt control . . . new type carrier that automatically ejects last slide . . . plus many other "extras." Built for a lifetime of enjoyment.

C-11 CASE — $9.95
EXTRA CARRIERS — $3.95
#1422 RIVIERA *with single switch and 5" f:4 lens* $59.50

$69.50 with 5" f:3.5 lens and choice of carrier

U.L.

EXTRA BRIGHT

BIND 'EM, VIEW 'EM, FILE 'EM WITH BRUMBERGER, TOO!

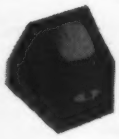
SLIDE BINDERS All steel with glass . . . protect valuable slides against fingerprints, scratches, dust. Rounded corners, simple snap assembly, panel for marking.

#1156 *Box of 20 2" x 2" (for 35 mm.)* $1.79

SLIDE FILES —portable, sturdy, safe. All steel construction for greatest protection of transparencies (up to 3¼" x 4"). Index card and numbered strips for instant selection.

$1.98 #1050 *Holds 100 2" x 2" cardboard slides.*

SLIDE VIEWER —takes all sizes, 35mm to 2¾" Built-in adapter centers all slides. Enlarges brilliantly. Electrically operated, complete with bulb, on-off switch and 6 ft. cord. #1225



$6.50

THE PERFECT CHRISTMAS GIFT

SEND FOR FREE CATALOG

BRUMBERGER

BRUMBERGER 34 Thirty-Fourth Street, Brooklyn 32, N. Y.
Gentlemen:
Please send me your complete catalog of all Brumberger photographic equipment.

Name .....
Address .....
City ..... Zone ..... State .....

DETROIT PUBLIC LIBRARY

COFFEE BREAK

(*Continued from page 12*)

in cooperation with Mrs. Harry Murkland, of the club. All enlargements for the exhibition were made in the UN laboratories.

PHOTOGRAPH COURTESY UNITED NATIONS

Bedrich Grunzweig: abstract view of UN

COMING NEXT MONTH • • •

• *Cartier-Bresson on Color.* A portfolio of 35mm color together with comments by and about one of the world's most skilled practitioners of the 35mm technique, the problems he came up against when he first turned to color, how he solved them, what he thinks the limits and possibilities of color are.

• *What is electronic flash?* The first of a thorough-going series on electronic flash, its theories and practices. You won't want to miss this series, beginning in February.

• *35mm portraits.* Another in our definitive series on 35mm work. How to avoid distortion, choosing the proper lens, how best to work with 35mm for natural light, bounce light, window light for effective portraiture—more than 8 pages.

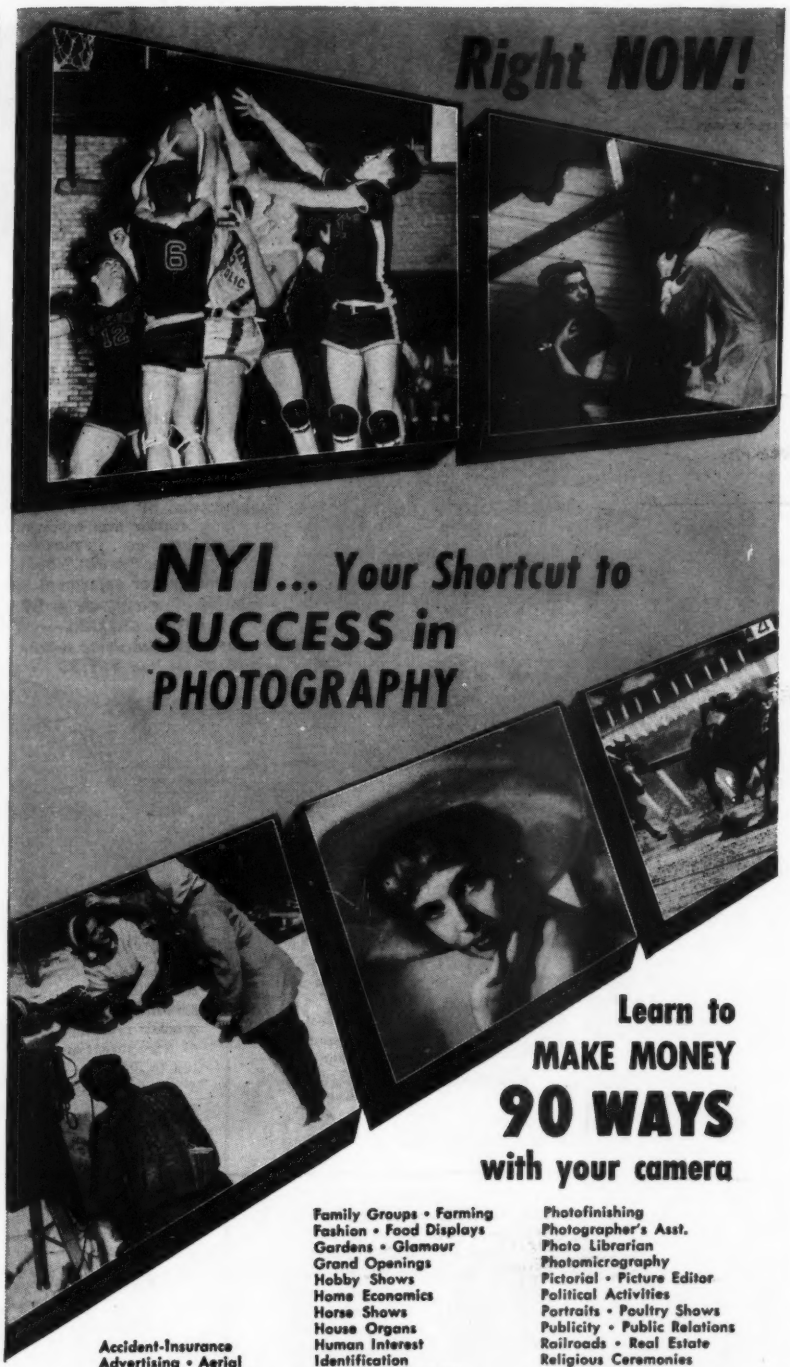
• *How to buy an enlarger.* If the numbers of enlargers now on the market confuse you, because you don't know which will fill your special needs, this 8-page comprehensive survey of the field is for you.

• *Special effects for titles.* If you're having movie title trouble, this may be the St. Bernard which will come to your rescue.

ADDENDA, LEOPARDS, ETC. • • •

• *Last month,* we were rather surprised to see an ad featuring a camera posed on the edge of an auto glove compartment. Glove compartments are no places for cameras—too hot and bouncy. Like the fashion model who poses near a leopard cage while wearing a leopard skin coat, we assume the camera didn't stay in the vicinity long after the picture was made.

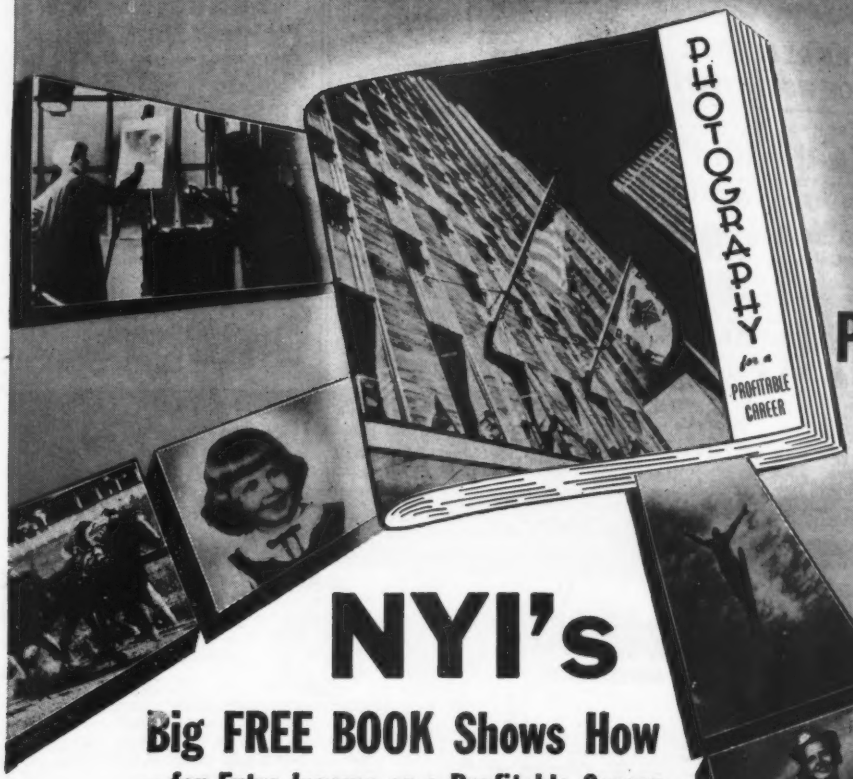
• *Discovery.* One of the most enthusiastic amateurs we know is Richard Simon, the first mentioned half of the publishing firm, Simon and Schuster. And to him we owe thanks for sending us to the work of a really outstanding amateur portraitist, Dr. Herman Moses, *page 46.*—THE END



Accident-Insurance
Advertising • Aerial
Airlines • Architecture
Banquets • Biological
Bowling • Calendars
Conventions
Camera Store • Candids
Catalogs • Celebrities
Cheesecake
Child Portraiture
Christenings
Church Activities
Civil Service • Commercial
Construction
Copying • Darkroom Asst.
Documentary • Factories
Family Groups • Farming
Fashion • Food Displays
Gardens • Glamour
Grand Openings
Hobby Shows
Home Economics
Horse Shows
House Organs
Human Interest
Identification
Industrial • Interiors
Investigative • Legal
Livestock Shows
Machinery
Magazine Stories • Covers
Manufacturing • Medical
Merchandise Displays
Metallography
Motion Picture
Natural Color
Nature Studies
Night Scenes • Oil Coloring
Parties • Passports
Pets • Photoengraving
Photofinishing
Photographer's Asst.
Photo Librarian
Photomicrography
Pictorial • Picture Editor
Political Activities
Portraits • Poultry Shows
Publicity • Public Relations
Railroads • Real Estate
Religious Ceremonies
Research • Resorts
Retouching
Spot News • Steamship
Store Fronts
Tabletops
Teaching
Television
Theatre
Trade Journals
Visual Aids • Weddings
Wild Life
Window Displays
Yearbooks
. . . and many more!

START THE NEW YEAR RIGHT...

RESOLVE IN '54... to learn how to MAKE MONEY in PHOTOGRAPHY!



NYI's

Big FREE BOOK Shows How

— for Extra Income or a Profitable Career

You can take one of two roads to your goal in photography. First, you can do it the hard way—through trial and error, struggling along for years with costly mistakes. A few—mighty few—have eventually found success this way. But for every one who made the grade on his own, thousands have fallen by the wayside. The other way—the quick, easy, proven way—is through training—NYI HOME STUDY TRAINING! Let NYI's big FREE book tell you all about today's and tomorrow's tremendous opportunities. Discover how you *can earn as you learn,* actually make the course pay for itself! Hundreds of NYI graduates have done it. Resolve now to become a money-making success in photography... for extra cash or a thrilling, full-time career! Send for the book AT ONCE!

NEW YORK INSTITUTE OF PHOTOGRAPHY
Dept. 117, 10 West 33 St., New York 1, N. Y.

44th YEAR

One of America's OLDEST and LARGEST PHOTOGRAPHY SCHOOLS
Leadership since 1910

APPROVED FOR ALL VETERAN TRAINING: You can now get NYI Correspondence or Resident Training under the new (P. L. 550) G.I. Bill.

RESIDENT TRAINING—Visit, write or phone our Resident School if you prefer On-the-Spot Training. Complete facilities include 14 studios, 18 streamlined labs, glamorous models, and the finest up-to-date speedlight and color equipment. Day and night sessions. Co-ed. Full or Special-Short-Term Courses. Deferred payment plan.

Send for YOUR book Today!

NEW YORK INSTITUTE OF PHOTOGRAPHY
Dept. 117, 10 West 33 Street, New York 1, N. Y.

Please send me complete information regarding

☐ Correspondence Course ☐ Resident Training

Name _____

Address _____

City _____ Zone _____ State _____

☐ Check if eligible under new G.I. Bill

FOR A LIMITED TIME ONLY...
AT NO INCREASE IN PRICE!
A GERMAN IMPORTED RANGEFINDER AND VIEWFINDER COMBINATION WORTH $9.95

WITH EACH PURCHASE OF A...

LEICA IF with f2
TAYLOR HOBSON COOKE LENS
LATEST RED DIAL MODEL!

Brand New And For Only ... 99.45

It's the newest Leica IF! Built-in synchronization for flash and Strobe. Focal plane shutter with speeds from 1/25 to 1/500 and "bulb".

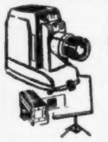
LEICA IF BODY ONLY ... 64.80
EACH CAMERA SOLD with LEICA REGISTRATION and CUSTOMS CERTIFICATE!

NO FINER LENS MADE... THAN THE 2" HARD-COATED f2 TAYLOR HOBSON COOKE
Acclaimed by all photographic experts, we quote a nationally syndicated columnist on the T.H.C. Lens. ". . . Its resolving power is spectacular . . . permits enlargements to the full limit of the film's resolution . . . a whale of a lens!" No wonder the Taylor Hobson Cooke is . . .
. . . VALUED AT $250.00!

LEICA IIF with f2 T. H. C. Lens
BRAND NEW! **165.95**
Twin eyepiece for built-in viewfinder and coupled rangefinder. Synchronized for all flash units and strobe.
Leica IIF body only 131.00

LEICA IIIF with f2 T. H. C. Lens
BRAND NEW! **244.95**
All features of the IIF PLUS speeds from 1 second to 1/1000, "bulb" and "time" Leica IIIF body only ... 210.00

Save $30.40! Brand New! FAMOUS MAKE
2x2 Slide Projector Outfit



- SVE SKYLINE B PROJECTOR
- Coated Lens
- Blower Cooled
- 300 Watt LIST $52.45!

PLUS
- Airequipt Automatic Changer List $16.95!
- Radiant Beaded 40x40 Tripod Screen List $15.95!

TOTAL LIST $85.35! **54.95** All for Only

SAVE $45.50! BRAND NEW! NEW SHIPMENT!
PRAKTICA FX
With Coated f3.5 Tessar Preset Lens

- Built-in FX Full flash Synch.
- Coupled Film Transport & Shutter-Cocking

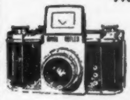
List 139.50 **94.50** Ship. Wt. 5 lbs.

Save $65.45! Brand New!
EICOR 115
TAPE RECORDER
with MICROPHONE & CASE!

- Records & Plays at 7½" per second
- Fast Forward & Rewind speeds
- Complete with Microphone & Case

LIST $144.95! **79[illegible]** Ship. Wt. 25 Lbs.

SAVE $70.00! BRAND NEW! LATEST MODEL!
RIVAL 35 'MX' REFLEX
Single-Lens Reflex With Coated f2.8 Tessar Preset Lens



- Built-in FX Full flash Synch.
- Coupled Film Transport & Shutter-Cocking

List $169.50! Ship Wt. 5 lbs. **99.50**

PEERLESS Year-

Once a year we sweep clean to make room for new stocks . . . new models! BUY NOW and take advantage of drastic reductions in all departments of new, used and demonstrator equipment!

SAVE $25.50! USED! COMPLETE 35mm
ARGUS C3 Outfit
CAMERA • CASE • FLASHGUN

- Coated f3.5 Lens
- Coupled Rangefinder
- Speed to 1/300 Sec. Synchronized
- Clip-on Eveready Carrying Case

LIST $69.50! **44.00** Ship. Wt. 7 Lbs.

SAVE $60.00! USED!
35mm STEREO REALIST
3-DIMENSIONAL CAMERA
With f3.5 Coated LENSES

- Built-In Flash Synch.

List $159.50! **99.50**
Ship. Wt. 7 lbs.

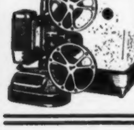
SAVE UP TO $105.45! World-Famous! BRAND NEW!
16mm MAGAZINE CAMERAS
BELL & HOWELL
AUTOLOAD

- Magazine Loading
- Coated f1.9 Lens
- Guaranteed for Life by B & H

LIST $214.95 SPECIAL **129.50** Ship. Wt. 10 Lbs.

BRAND NEW MAGAZINE LOADING **B & H AUTOMASTER** List $274.95
3-Lens Turret Movie Camera with f1.9 Lens, Guaranteed for Life.
Wt. 11 Lbs. **169.50**

SAVE $60.00! USED!
De JUR 750
8mm MOVIE PROJECTOR



- 1 inch f1.6 Lens
- 750 Watt

List $149.50 **89.50** Ship. Wt. 25 lbs.

FAMOUS MAKE
EXPOSURE METERS
Save $6.00! Brand New!
De JUR 5B

List $15.95! **9.95** Ship. Wt. 3 lbs.

USED EXPOSURE METER VALUES!

	List	New
Weston Master	29.95	16.95
G.E. DW-68	24.50	15.95
Norwood Director	32.95	19.95
G.E. PR-1	32.50	18.95
Weston Cadet	19.95	12.95

Clearance!

35MM CAMERAS

	New	Used
Clarus "35," f2.8	116.50	42.50
Argus C4, cf2.8 RF	89.50	53.00
Bolsey "B", cf3.2, RF	61.50	29.00
Bolsey 'B-2', cf3.2*	73.50	44.50
Weltini 35mm, f2.8 Tessar RF	106.50	49.95
Bolsey 'C', cf3.2*	109.50	63.00

KODAK SIGNET, 35mm, Rangefinder Ektar F:3.5, synchro. LIKE NEW. 64.50

	New	Used
KODAK 35, cf3.5*, RF		54.50
Canon, Serenar, f1.8 RF	295.00	189.00
Retina II, cf2 Xenon	197.70	89.00
Contessa 35 Tess, 2.8 RF*	214.00	114.00
Kodak Bantam Spec, f2 Ektar, RF	125.00	79.50
Exa Camera, cf2.9	99.50	61.00

PENTACON, Zeiss Biotar F:2 'T' ctd. synchro. USED ...$178.00

	New	Used
Argus C2, f3.5, RF		24.50
Kodak 35, RF, f3.5	86.75	38.00
Robot II, f2* Biotar	Spec.	79.00
Kodak Pony 135, cf4.5	35.75	23.00
Minox II, cf3.5 Lens	Spec.	59.50
Mercury II, f2.7	41.50	21.00
Tenax II, f2 Sonnar, RF		99.50
Nikon, cf1.4, RF	349.00	219.00
Vitessa, cf2*, RF	159.50	119.50
Praktica FX, Tess., 3.5 pre-set	94.50	
Retina II, Xenon f.2		79.00
Weltini, f2 Xenon, RF		79.50
Retina IIA, Xenon f.2*	164.10	114.00
Retina II, Kodak, f2.0, RF		69.50
Bantam Flash Kodak, cf4.5*	56.00	37.50
Revere Stereo 33, f3.5*	174.50	106.00
Bellina II, f2.9, RF		49.50
Robot II, f2.8*		62.50
Ektra Kodak, cf1.9, RF		198.00
Robot 'Star', Xenon f1.9	249.50	134.50
Ikonta 35 Zeiss, cf2.8*	120.00	74.50
Voigtl. Vito II, f3.5*	54.75	34.00
Karat II, f2.8 Xenar, RF		29.50
Voigtlander Prominent, f1.5	275.00	177.00
Argus A-4, cf3.5*	39.50	
Argus 21, cf3.5*	62.10	31.50
Karomat, cf2 RF *	164.10	98.00
Bolsey C 22, cf3.2 Reflex *	115.50	
Kodak Pony 828, cf4.5 *	31.15	19.95
EXA, cf3.5 Tessar *	119.95	80.00

LEICA, CONTAX, EXAKTA

	New	Used
Leica G, Summar f.2		118.00
Leica D, Rfdr f3.5 Elmar		71.00
Leica IIIC, Summitar f.2	359.00	168.00
Leica IIIC, f3.5 Elmar		128.00
Leica IIIF, Summitar f.2	368.00	229.00
Contax I, f.2 Sonnar		67.00
Leica IIIF, Summicron f.2	393.00	
Contax II, f.2 Sonnar		129.50
35mm Summaron, f3.5 W.A.	102.00	67.00
Kine Exakta 1, cf3.5 Tessar *		84.50
50mm Elmar, f3.5	68.00	32.00
50mm Summicron, f.2	183.00	
50mm Summitar, f.2	173.40	83.50
Kine Exakta VX, cf3.5 Tessar *	249.50	172.50
50mm Summarit, f1.5	224.40	138.00
Kine Exakta VX, Body Only *	209.50	155.00
85mm Summarex, f1.5	442.00	198.00
90mm Elmar, f.4 Chrome	98.00	64.00
135mm Hektor, f4.5	150.00	71.50
200mm Telyt, w/reflex housg.	258.00	179.00
Contax 'D', Biotar f.2	359.00	175.00
35mm Biogon, f2.8 W.A.		87.00
Contax II, Synchro-Tess 2.8		112.00
Biogon, W.A. For IIA & IIIA	245.00	134.00
Contax 11A, Sonnar f.2	399.00	210.00
Contax III, Sonnar f1.5		167.00
85mm Sonnar, f.2	292.00	118.00
Contax IIIA, Sonnar f1.5	482.00	298.00
135mm Sonnar, f.4	170.00	97.00

SAVE $37.00! USED!
REVERE 88
8mm MOVIE CAMERA
with Coated f2.5 Lens

- Variable Speeds
- Optical Finder

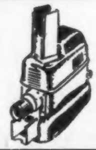
List $74.50 **37.50** Ship. Wt. 5 lbs.

AN UNUSUAL PEERLESS VALUE!
2¼ x 3¼ ANNIVERSARY
SPEED GRAPHIC PRESS OUTFIT
with f4.5 Kodak Lens

- Coupled Kalart Rangefinder
- Synchro. FLASHGUN

Used **99.50** Ship. Wt. 12 Lbs.

SAVE $30.50! Brand New
LA BELLE 500
2x2 SLIDE PROJECTOR



- 500 Watt
- Blower-Cooled
- Coated f3.5 Lens

List $95.00! **64.50** Ship. Wt. 16 Lbs.

SAVE $27.00! BRAND NEW
Smallest, Lightest Electronic Flash!
CEBE 1
Complete with Leather Case & Batteries

- Approx. 1000 Flashes
- Only 2½ lbs.
- Speeds to 1/700 Second

List $69.95 **42.95** Ship. Wt. 3 Lbs.

PRICE SLASH! BRAND NEW, LATEST 1953
Carl Zeiss CONTESSA 35
35mm Camera with f2.8 Tessar Lens

- Built-in Exp. Meter, Rangefinder and Viewfinder
- Full Flash Synch.

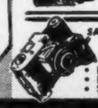
Formerly $204.00! **153.00** Ship. Wt. 5 Lbs.

BRAND NEW! Just Out! Save $18.55!
NEW, SENSATIONAL GERMAN IMPORT
PEERLESS EXCLUSIVE
RIVAL ROLL-FILM
620 Camera with f4.5 Coated Lens

- Built-in Eyelevel Sportsfinder
- Speeds to 1/200 Sec.

Value $43.50! **24.95** Ship. Wt. 4 lbs.

SAVE 25.45! BRAND NEW! EXCLUSIVE with PEERLESS . . .
RIVAL '35'
f3.5 Ctd. Lens in Flash Shutter



- Focuses 3½ Feet to Infinity
- Body Shutter Release
- Speeds to 1/300 Sec.

List $57.95 **32.50** Ship. Wt. 5 Lbs.

AND . . . IF YOU DON'T SEE IT ON THESE TWO PAGES . . . WRITE FOR IT . . . WE HAVE IT . . . AND AT PRICES THAT MADE PEERLESS FAMOUS!

SAVE $39.95! BRAND NEW!

GERMAN IMPORTED!

EXCLUSIVE!

PEER-FLEKTA II

2¼ x 2¼ TWIN-LENS REFLEX

with f3.5 Coated Lens

- Built-in Flash Synchronization
- 9 Shutter speeds 1 second to 1/200
- Double Exposure Prevention

List $69.50!

At Peerless for Only ... **29.95**

Ship. Wt. 7 Lbs.

SAVE $83.05! BRAND NEW!

EPCO LM 300 ELECTRONIC FLASH UNIT

Complete with Battery!

- 50,000 Flashes Guaranteed!
- AC or Battery

List $123.00!

39.95

Ship Wt. 12 lbs.

SAVE $74.00! BRAND NEW

4x5 PACEMAKER GRAPHIC OUTFIT

with 135mm f4.5 Ctd. Lens

COMPLETE OUTFIT INCLUDES:

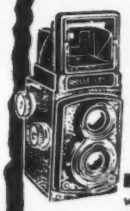
- Compur Synchro "X" Shutter
- Coupled Kalart RF—Installed
- 3-cell Press Gun, Reflector, Cord, Solenoid—Installed

List $253.50! **179.50** Ship. Wt. 10 Lbs.

SAVE $45.00 Every One BRAND NEW!

ROLLEICORD III

with f3.5 Coated Zeiss Triotar Lens.



- Built-in Flash Synchronization
- Compur Rapid Shutter
- Speeds 1 Second to 1/500
- Exposure Counter

UNBELIEVABLY LOW PRICED AT...

Discontinued Models **79.50** List $124.50!

BRAND NEW! ROLLEICORD III

with f3.5 Coated Schneider Xenar Lens

$15.00 Eveready Case . . . $10.00! List $134.50! **89.50**

A PEERLESS EXCLUSIVE! FAMOUS IMPORTED

Hambletonian BINOCULARS

PRISM—FULLY COATED LENSES

ALL METAL CONSTRUCTION

ALL COMPLETE with LEATHER CASE and STRAPS

SAVE $52.00! HIGH POWER

7 x 50 Binocular 25.95* List $77.95!

7x30 Binocular—Central Focus ..List 86.95..29.95*
6x30 Binocular—Central Focus ..List 65.95..23.95*
6x30 Binocular—Individual Focus ...List 59.95..19.95*
8x30 Binocular—Individual Focus ..List 69.95..21.95*
8x30 Binocular—Central Focus ..List 75.95..25.95*

Bausch & Lomb Type

SAVE $54.00! BRAND NEW

7x35 Binocular 26.95* List $80.95!

THEATRE GLASSES List $35.95!

- 6 x 15 PRISM Glass
- Compact

6x15 in 24 K. Gold Plate—List 60.00 ..... 19.95*

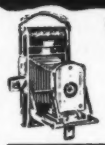
*Plus 20% F.E.T.

End CLEARANCE!

All orders for delivery within Continental U. S., received one week prior to December 25th will be received in time for Christmas. Please designate desired delivery time and method of shipment.

SAVE $32.25! USED!

POLAROID CAMERA



"Picture-in-a-Minute" SENSATION!

- Coated Lens
- Takes 3¼ x 4¼ Pictures
- Built-in Flash Synch.
- Focuses from 3¼ Feet to Infinity
- Easy to Load—Easy to use

LIST $89.75! **57.50** Ship. Wt. 10 Lbs.

SAVE $28.00! USED!

KODAK SIGNET-35mm Camera

With Coated Ektar f3.5 Lens

- Flash Synchronized
- Double Exposure Prevention
- Coupled Rangefinder/Viewfinder

List $92.50! **64.50** Ship. Wt. 5 Lbs.

SAVE $108.50! USED — LIKE NEW!

KINE EXAKTA VX

With f2 Coated Zeiss Biotar Lens

- Preset Diaphragm
- Built-in Synch. for Flash & Strobe
- Self-Timer
- 29 Speeds from 12 Sec. to 1/1000 Sec.

List $343.00! **234.50** Ship. Wt. 5 Lbs.

SENSATIONAL BUY! BRAND NEW

4x5 BUSCH PRESS OUTFIT

- 135mm f4.5 coated Lens
- Compur Synchro "X" Shutter
- Kalart RF Installed
- 3-Cell Flashgun with Solenoid Installed

Complete for only **129.50** Ship. Wt. 10 Lbs.

Clearance!

REFLEX CAMERAS	New	Used
Ciroflex D, cf3.5 *	59.95	47.00
Ciroflex Rapax, *	93.50	59.50
Ciroflex E, cf3.5 *		68.00
Graflex 22, f3.5 *	89.50	64.50
Graflex, 22/400F cf3.2 *	158.00	
Hasselblad Ektar, f2.8	499.50	315.00
Auto Rolleiflex, cf3.5 Tessar		128.00
Auto Rolleiflex X-M, cf3.5 Xenar	265.00	164.50
Auto Rolleiflex X-M, cf3.5 Tessar	285.00	184.00
RICOHFLEX, Latest, f:3.5 ctd. synchro. BRAND NEW		$37.50
Rolleiflex Auto, Xenar f3.5		108.00
Rolleiflex Auto, Tessar f3.5		57.90
Rolleicord II, f3.5		59.00
Rolleicord IV, AK Xenar 3.5	134.55	
Kodak Reflex II, cf3.5	134.00	69.00
ROLL FILM CAMERAS		
Kodak Tourist 620, cf4.5*	71.00	39.50
Medalist, Ektar f3.5, RF		78.00
Kodak Monitor, cf4.5* Lens	57.50	39.50
Medalist II, Ektar 3.5, RF	297.50	137.00
Perkeo I, cf4.5 Lens	Spec.	33.50
Super Ikonta A, Tess. 3.5, RF	162.00	39.00
Voigtlander Bessa 66, f4.5*	49.50	29.50
Super Ikonta B, Tess. 2.8, RF	236.00	88.50
Ansco Speedex, f4.5	45.00	29.50
Super Ikonta C, Tess. 3.5, RF	186.00	84.00
Zeiss Super Ikonta A, Special, f3.5 Novar, RF	142.00	69.50
Super Ikonta BX, Tess. 2.8, RF	280.00	119.00
Voigt. Bessa II, R.F. Skopar 3.5	124.00	66.00
Minox III, cf3.5	129.50	89.50
Polaroid Pathfinder, f4.5	249.50	169.00
8MM CAMERAS & PROJECTORS		
Revere 50, f2.8	49.50	27.00
Revere Ranger, f2.3	74.50	44.00
Revere 40, Mag. f2.5	99.50	62.00
Revere 84, Turret, f2.8	112.50	73.75
B&H 221, 500W, case	99.95	60.75
DeJur, 750W, Case	139.50	86.50
Keystone K-70, 500W, case	79.90	53.00
Keystone K-66, 750W, case	127.50	73.50
Kodak Brownie, Case	62.50	44.00
Revere 85, 500W, Case	124.50	63.00
Revere 98, deluxe, 750W Case	139.50	89.50

Just Out! Our Exclusive BRAND NEW

RIVAL CONDENSER ENLARGER

35mm to 2¼ x 2¼

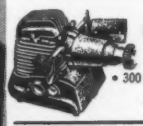
- 3½" f4.5 Coated lens
- Condenser Assembly rotating negative carrier
- 75 Watt Lamp
- Sturdy Baseboard
- Tilt-head for Distortion Control
- Built-in Red Filter

Save $32.70! Priced at a low ... **27.95** Ship. wt. 20 lbs.

ANOTHER PEERLESS EXCLUSIVE SAVING!

SAVE $34.00! USED 2x2

GOLDE MANUMATIC SLIDE PROJECTOR



- 300 Watt
- Blower-Cooled
- 5" ctd. f3.5 Lens

List $58.50 **34.50** Ship. Wt. 20 Lbs.

SAVE $99.50! BRAND NEW! WORLD FAMOUS 35mm IMPORT

AKAREX

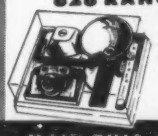
f2. ctd. Schneider-Xenon Lens

- Prontor SV Shutter
- Internal Synch. for Flash & Strobe
- Simultaneous Shutter Cocking & Film Transport
- Double Exposure Prevention Device
- Exposure Counter
- Self-Timer
- Interchangeable Lens System

List $198.50 **99.00** Ship. Wt. 7 Lbs.

JUST OUT! BRAND NEW!

KODAK Town & Country Outfit with 828 RANGEFINDER Camera



- CAMERA • CASE • FLASH GUN with coated Ektanon f3.9 Lens
- Coupled RANGEFINDER VIEWFINDER
- Flash Synchronized
- Speed from 1/25 to 1/300

at the low price of **78.50** Ship. Wt. 6 lbs.

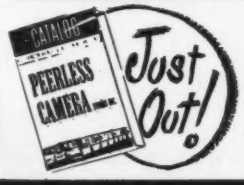
10 DAY FREE TRIAL!

10-DAY TRIAL with FULL MONEY-BACK GUARANTEE!
1 FULL YEAR OF SERVICE

All items offered subject to prior Sale! Add Estimated Shipping Costs. We'll refund every cent not used. If you prefer C.O.D. please send 10% Deposit! PRICES SUBJECT TO CHANGE WITHOUT NOTICE!

SYMBOLS:
¢ Coated Lens
* Flash Shutter
RF Coupled Rangefinder

MAIL THIS COUPON TODAY!
USE SPECIAL INQUIRY SECTION FOR ITEMS NOT LISTED ON THESE THREE PAGES.



OUR 1954, 98-PAGE

Completely New...

PEERLESS CATALOG

THE MOST COMPLETE PHOTOGRAPHIC CATALOG IN THE WORLD!

Only 10¢ — 25¢ Back on First Purchase

ALL LATEST 1954 MODELS ILLUSTRATED!

PEERLESS CAMERA STORES

415 Lexington Avenue, New York 17, N. Y. • Dept. M-1

☐ I WANT TO BUY _____

☐ I WANT TO TRADE. Rush best offer for my _____

☐ Send NEW GIANT CATALOGUE. Enclosed find 10c.

SPECIAL INQUIRY SECTION For Items NOT LISTED in this ad.
I am interested in a _____
_____ I want to spend $ _____

NAME _____

ADDRESS _____

CITY/TOWN _____ STATE _____

PEERLESS CAMERA

415 LEXINGTON Ave. at 43rd St. N.Y. 17

Opp. Grand Central Terminal · MU 7-1000

Guaranteed for a Lifetime

Viewlex

2¼ x 2¼

AND 2x2 SLIDE PROJECTOR

Model V-5, 150-watt convection cooled.

Model V-53, 300-watt motor fan cooled.

Model V55, 500-watt motor fan cooled.

Priceless moments that you want to remember always . . . the youngsters playing on the sun-kissed sands . . . the colorful glory of fall on a brisk October morning . . . birthday parties — graduations — all those memorable milestones of family life that become more precious with the passing years. Capture and hold them forever on your color slides . . . and when you re-live the scenes that make life worthwhile . . . choose Viewlex to give your slides the kind of projection they deserve.

For colorful illustrated literature Write Department DF2

Priced from $38.05 to $495.00 at all better camera stores

Viewlex INC. 35-01 QUEENS BOULEVARD LONG ISLAND CITY 1, N. Y.

the last word

Self-Portrait Plus

Sirs:

Here is one of the most interesting pictures I ever made. It is a combination of two negatives shot four years apart, and printed together. The self-portrait was made in 1948 with Argoflex and accessory Portra lens, at f/5.6 and 1/25 with two No. 1 floods. The

negative of the spider's web was made in Japan, recently, with a Japanese Mamiyaflex.

Realizing the web might be effective superimposed on another negative, I dug out this self-portrait from the files —plus a half dozen other negatives— all of which seemed different when printed with the web.

FPO San Francisco David Strickler

Peak Action?

Sirs:

I had the lens of my Exakta protruding through the bars, while I was busy looking through the reflex magnifying

mirror. That's why I didn't notice the lion's left paw which knocked my lens hood off a second after flash. I did not retrieve it. Exposure was 1/100 at f/8.

Rochester, N.Y. Jack Zingle

FOR THE 8MM MOVIE FAN

Reg. $6.95. Save 57%
MANSFIELD
CINE TITLER $2.95

If purchased at the same time as Action Viewer, Action or Super-Deluxe Editor

Titles add action, provide continuity for your movies! Yet, making titles is so simple with the Cine-Titler! Sturdy metal construction. Auxiliary lens for exact focus. Photograph picture, postcards, titles of your own design: you can even shoot animated titles — an instruction booklet accompanies every titler.
Shipping Weight 4 lbs.
Titler alone $4.64

Save $10.55 on complete Famous Make 4-piece
8MM EDITING OUTFIT $10.95

A value like never before! Outfit contains Projection Editing Viewer, with bulb, pair of rewinds with brakes, all metal splicer, all ready for simple mounting on board or table (not supplied). Can you afford to pass up such a value?
Shipping Weight 6 lbs.

Save on parts, too: Deluxe splicer, reg. $7.50—$4.95; Economy splicer, reg. $3.50 — $1.98; Deluxe rewind, reg. $7.50—$4.95 (pair)

8MM PROJECTION EDITING VIEWER

$6.95 You'll more than ever enjoy editing your movies when you use this neat, all-metal, electric editing viewer. It projects a clear image on the groundglass, makes possible viewing from a comfortable distance.
Ship. Wt. 3 lbs.

Metal 8mm Reels & Cans
200 ft. sets—6 for $2.98
400 ft. sets—3 for $2.98
300 ft. sets—3 for $2.98

SUPER-DELUXE 8MM EDITOR

Projection Editing Viewer with bulb (List $10.50), pair of deluxe rewinds with brakes (List $7.50), automatic dry-splicer (List $7.50), metal base (List $2.95) — complete 5-piece outfit yours for only $16.95. Ship. Wgt. 6 lbs. **$16.95**

ACTION EDITING OUTFIT $29.95

If you'd spend 100% more, you wouldn't get a better buy than this 5 pc. outfit. 8mm action editing viewer, automatic dryesplicer with built-in scraper, pair of precision machined geared rewinds with fingertip controlled drag brakes and 1200 ft. capacity, plus a sturdy base — this 5 pc. outfit costs actually less than the lowest-priced action viewer would cost alone! Ship. Wt. 10 lbs.

ACTION VIEWER $19.95

A viewer which makes editing a real pleasure, projects brilliant 2½ x 3½" pictures in full action on the built-in groundglass screen — not just one frame at a time, but in continuous motion! Operator can adjust focus to his own vision. Easy to thread, scratch-proof, scientific ventilation of lamphousing — really a blessing for movies fans with a limited budget who know they'd have to spend $40.00 and up for a viewer like it!
Shipping Weight 4 lbs.

Titler, Action Viewer and Action Editing Outfit also available for 16mm at the same low prices!

Lowest Prices Ever! Portable, Crystal-Beaded
30 x 40 TRIPOD SCREEN $7.69

Despite higher steel prices, Spiratone continues to offer you the biggest bargains in screens ever! Same quality as before, and as praised by thousands of movie and slidefans: Crystal-beaded pyroxylyn surface; screen raises and lowers on elevating rod, assuring positive alignment. Metal can has beautiful scratch-resistant finish. Carrying handle sets automatically for balanced carrying. Sturdy tripod is plated and has protective rubber tips. Thousands of these screens are in use, not only by amateurs, but by clubs, churches, colleges as well.

Screen Size	Appr. Shpg. Wt.*
30"x40"	7.69 10 lbs.
40"x40"	9.18 11 lbs.
37"x50"	10.64* 14 lbs.
50"x50"	12.97* 15 lbs.
52"x70"	24.95*

** These screens are shipped by us Express (freight costs collect) within U.S. — other screens can be shipped P.P. or Express.*

Unbelievable Savings on Coated, Color-corrected
8MM TELEPHOTO—WIDEANGLE 'PACKAGES'

PACKAGE A 1½" f:1.9 3X focusing telephoto (clickstops, depth of field scale), plus 6mm f:1.9 extreme wideangle (six elements, clickstops, filterholder) $59.95
PACKAGE B 1½" f:3.2 3X focusing telephoto, plus 9mm f:1.9 extreme wideangle..... $49.95
PACKAGE C 1½" f:3.2 3X universal focus telephoto, plus 7mm f:2.5 4X wideangle (clickstops, filterholder) $35.95
BONUS: On request with any 'package'—1" f:3.5 2X telephoto, at no extra cost.

Brand new, coated, color-corrected
7MM f:2.5 WIDEANGLE LENS for 8MM 19.95

At last—a fine 8mm wideangle lens priced within every movie fan's reach! Covers four times the area of your normal lens, makes movies-taking indoors, of large groups in limited space or wherever greater coverage and an enormous depth of field are desirable, simple and effective. Chrome finish, click stops, D or B&H mount.
6MM f:1.9, an extremely fast extreme six-element wideangle lens with clickstops, built-in filterholder — designed for the demanding movie fan who appreciates a wealth of features, at the low, low price of **$29.95**

FOR COLOR FOR BLACK AND WHITE *Spiratone* AUXILIARY TELEPHOTO AND WIDEANGLE LENSES HAVE PROVEN A MUST FOR 35mm

For these Cameras: Argus C2, C3, C4, 21, Bantam, Boiscy B, B2, C, B22, C22, Contessa 35, Edinex, Kodak 35 (RF), Mercury II, Perfex, Polaroid Land, Posy B28, 135, Retina I, II, Signet, Vito and most other 35MM cameras.

$29.95 Set of Telephoto and Wideangle lenses in double leather case, for any camera listed. $16.95 each lens

NEW! MATCHING TELEPHOTO AND WIDEANGLE FINDERS, for use with auxiliary lenses. Can be used handheld or fit accessory clip of Retina, Contessa, etc. For Argus C3, easily installed accessory clip $1.00. Finders are chromefinished, precision made. EACH $3.95. Both for $7.49.

FILTERS: Your choice of medium yellow*, green*, orange*, red*, haze*, photoflood*, type A, UV-16, UV-17 and skylight for use with Spiratone lenses. Each filter. $1.00

Wideangle Finder Attachment for non-reflex 35MM and B26 cameras. $1.95

PROVEN FEATURES STILL AVAILABLE DESPITE NEW LOW PRICES:
- Extra-hard S-coating
- Full color correction
- Free genuine leather case
- Lifetime Service Guarantee
- No change in exposure or lens opening necessary

***TAX REDUCTION SPECIAL**
FREE: Your selection of any two of the filters marked * with every Spiratone aux. lens ordered. With order for set, select four free filters or pay only $4.98 and receive all ten filters listed.

When ordering, be sure to state what camera and lens you have.

BRAND NEW FEATURES NOT AVAILABLE BEFORE

Telephoto Finder Mask, supplied free of charge with every lens, for every non-reflex 35MM camera.
All lenses furnished with either built-in or separate filterholders (save $1.25 or more per lens!) Interchangeability of adapters, so that one lens may often be used on several different cameras.*
Scientifically designed means of attachment of auxiliary lens to camera — every adapter expressly fitted for your camera.
*If you wish to purchase a lens or set of lenses to be used on two or more cameras, write us what your problem is, and we will try to furnish you with that model which can be adapted for use with your particular cameras. Each lens is furnished for use with one camera only —additional adapters are $1.25 each.
Shipping cost, for 1 lens 25c for set of lenses 65c

FREE 12 Page Booklet Tells All About Auxiliary Lenses, Write For It!

Famous Make Coated 40mm f:3.5
WIDEANGLE LENS FOR EXAKTA $29.95

Covers 55 degrees (regular 58mm lens covers 39 degrees). Helical focusing mount, brass barrel, depth of field scale and needlesharp definition — finer than with the most expensive wideangle lenses. DeLuxe Leather Case with strap $3.95.
Shipping Charge 50c

2 for $4.15 4 for $8.00 **2x2 ALL METAL SLIDEFILE, $2.19**
Accommodates 300 redimounts or 150 glass-slides. Slots prevent rattling. Index. Clamp lock and handle. *Ship. Wt. 3½ lbs. each.*

LEICA-CANON 135MM LENS SPECIALS

	PLUS	Over List
Popular 135mm f:3.8 rangefinder-coupled coated COLINAR in new satin lightweight mount, one of the sharpest 135mm lenses made, regardless of cost. Saving		
135mm finder and Super-Nooky	$49.95	$25.90
or PLUS 28mm to 135mm Zoom Finder and Super-Nooky	79.95	36.90
or PLUS Reflex Housing and Super-Nooky	89.95	36.90

Super-Nooky couples rangefinder to highly corrected closeup lens, permits rapid closeup focusing from 20" to 38". State normal lens you have when ordering. $19.95
Leather Case for 135mm lens $5.75.
Individual accessories for Leica and Canon are also available at rock-bottom prices:
Accura REFLEX HOUSING, shows upright enlarged image through extra bright magnifier, mirror jumps up when shutter is released. Ideal for parallax-free closeup, tele, scientific photography. $39.95
Telephoto, normal and wideangle FINDERS, with parallax correction, leather cases, available for 35mm, 50mm, 85mm, 90mm, 135mm $6.95
SELFTIMER, fits over Leica release button, has automatically retracting pin for smooth operation. $2.95
Set of three EXTENSION TUBES, metal $3.95
LENS CASES for all Leica Lenses: 35mm, 50mm $3.95, 90mm $4.95, 135mm $5.75.

THREE UNIT **REFLECTOR OUTFIT $5.49**

Two aluminum 10" reflectors for #1 or #2 bulbs, one bullet reflector for spot effects, all three complete with swivel joint, switch, socket, clamp and cord — at a fraction of their usual cost.

SUGGESTION: 2 #2, 1 #1 photoflood bulbs 86c.
Shipping Weight 5½ lbs.
Free on request with $5.49 or $6.49 outfit: Shutter Speed Tester

Only Spiratone offers you this $11.00
PHOTOFLOOD STAND FOR + TWO REFLECTORS ONLY **$6.49**

The Ideal Indoor Lighting Set-up 3-section metal stand extends to 6'4". Sturdy, braced legs with rubber tips. Stand telescopes compactly to only 2 feet. Positive locking at any desired height. 22" crossbar. Can also be used to hold screen, backgrounds. Two spun-aluminum 10" reflectors (for #1 or 2 photofloods), complete with sockets, switches, 6' cords, ball-socket swivel joints, rubber-jawed spring clamps. Can be used on crossbar or furniture. Complete outfit $6.40.
Shipping Wgts.: Stand 4 lbs. Reflectors 4 lbs.
Suggestion: Two #2 photoflood bulbs..... $ .66
Extra Clamp-on bullet with bulb (for semi-spot) 1.79
Photoflood Stand with Crossbar only..... 3.49

Famous German
WIDEANGLE FOR 4 x 5 $21.95

in famous Prontor S synchro shutter
Commercial photographers and advanced amateurs alike have waited for just such a buy! Made by Leitmeyr, an old-time German optical manufacturer, the 105mm f:6.8 coated wideangle anastigmat is for the 4x5 press camera owner just "what the doctor ordered". It covers approximately 85 degrees, and one half of the lens can be removed, converting it into a telephoto double the original focus length. The popular shutter has eight speeds and B; delayed action and built-in flash. Shipg. Cost 35c.
Lensboard, with proper opening, for Speed Graphic, $2.00. Busch $2.40 State model.

Famous Make German Doppel-Anastigmat
8 f:4.5 PRESS TELEPHOTO $34.95

Made by Leitmeyr, old-time German 1st manufacturer of lenses for press cameras, this fast, coated telephoto lens in barrel can be used with any 4x5 camera with a double extension bellows and a focal plane shutter. Excellent for portraits because of its fine perspective, this lens is equally suited for distant subject—sports, animals, scenic subjects.

SPIRATONE BACKS AND RECOMMENDS THESE NATIONALLY KNOWN QUALITY
LEATHER GADGET BAGS

Made by one of the foremost manufacturers in the field, and exclusively offered by us, through a special purchase, below or close to the usual wholesale prices. These bags are all brand new first class merchandise not to be confused with "seconds" or "closeouts" of inferior leather bags. Ship. Wt. of Gadget Bags 3, 4, 4, 4 & 6 lbs.

SP35 is the ideal gadgetbag for the 35mm fan. It is elegantly compact, 10" x 7" x 3", has an oversize outside pocket (8"x4"x1½"), brass fittings and a wraparound zipper which makes the entire contents instantly accessible. The bag is made of a specially treated cowhide in a tan finish. Spiratone-designed and Spiratone-priced at **$5.95**

SP3. The SP3 is liked for its overall versatility. Made of topgrain oltanned cowhide, the SP3 has one large, two small inside pockets, a roomy outside pocket that will hold plenty of the extras that make picture-taking real fun. Rigid shape-retaining bottom, reinforced with brass studs. 8"x10" x3"—recommended for the camera fan who likes his filters, exposure meter, extra films accessible, yet prefers a compact bag. Budget-priced at half of list. **$6.95**

SP4. A jumbo-sized, well-made genuine cowhide bag of beautiful appearance. Ample in size — 9"x11½"x4" —for small press cameras and plenty of accessories. Zipper around top for easy accessibility of contents. Roomy inside pockets and an extra large outside pocket. **$10.95**

SP5. A topgrain pigskin bag for the advanced amateur or professional, large enough for press cameras (10"x14" x5"), or for taking "both cameras" along. "Wraparound" zipper, flashgun holder, shoulder pad. If you couldn't afford that $30.00 bag, you won't pass up the SP5 at a 54% saving. **$13.95**

SP6. The latest addition to our line, and one of the finest. An oversize genuine cowhide pressbag, 10½"x 14"x3", largest size available in gadget bags costing normally $40.00 to $50.00. Adjustable strap with shoulderpad runs around bottom of bag—no equipment too heavy for this bag! Inside cover are a batterycase holder and a zippered pocket; on sides are one large pocket for meter, two small ones for filters. Adaptable inside partition. Back and bottom are fibreboard lined for extra support. We'd bet you'd only expect to pay that little only for a plastic bag, for the cowhide SP6 is Spiratone-priced at **$17.95**

All prices include excise tax. Postage and insurance MUST be prepaid, even when no shipping weight is stated—overpayment will be credited in full. Everything listed is brand-new (unless otherwise stated) and fully guaranteed against defects. 25% deposit on C.O.D.'s. Items marked FREE must be requested at time of purchase!

SPIRATONE INC.

49 WEST 27th ST., Dept. M1, N. Y. 1
Address mail orders to
32-34 STEINWAY ST., Dept M1, L. I. CITY 3, N. Y.

INDECENT EXPOSURE

IT'S ABSOLUTELY INDECENT to pay good money time and again for over-exposed flashbulb pictures! Yet photo-finishers say 97% of all flash shots are impaired by over-exposure... that ordinary bulbs create too much light.

Your one perfect answer is Norelco My-T-Myte Flashbulbs... especially designed for popular "open flash" fixed-focus cameras. And besides giving just the right amount of light, My-T-Mytes are the smallest bulbs ever made.

Lowest-priced on the market, My-T-Mytes come in two sizes: PF3 for perfect close-ups and all average shots, 12¢ each; PF4 for greater distances or faster speeds, 12½¢ each. Take advantage of the free offer, below.

NORELCO

MY-T-MYTE

MIDGET FLASHBULBS

AN AMPLEX EXCLUSIVE

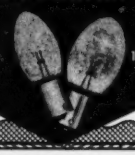
FREE OFFER!

Clip and fill in gift certificate. Buy one Pocket Pak of My-T-Mytes. For certificate, dealer will give you two extra My-T-Mytes. Use these two. Unless they produce the best flash pictures you've ever taken, return unused carton of bulbs for full cash refund.

AMPLEX CORP.

Brooklyn 1, N. Y.

MY-T-MYTE AND SYNCHRO-SURE FLASHBULBS



PF3 12¢ ea. PF4 12½¢ ea.

GIFT CERTIFICATE 1 C

Mr. Photo Dealer,
Give the bearer two My-T-Myte Flashbulbs FREE upon his purchase of one 10 bulb My-T-Myte Pocket Pak. If he returns the Pak—unused—you will refund him the full purchase price. Amplex Corporation, 111 Water St., Brooklyn 1, N.Y.

Your name_____

Address_____

new products

Edina Rapid-O-Matic

Two 35mm cameras feature coupled film transport, shutter wind, and exposure counter which are quickly actuated by pushing a special lever wind. A direct optical viewfinder, built-in

sync, accessory shoe, and rapid film rewind knob are other features of the Rapid-O-Matic. A depth of focus scale is engraved on the lens mount, and the body release is threaded for a cable release.

Two models of the Rapid-O-Matic, made in Western Germany, are available. Both are finished in black morocco with satin chrome trim. The model A, with an f/3.5 coated lens and Vario shutter, has speeds of 1/25th, 1/50th, and 1/200th. Price, $29.95.

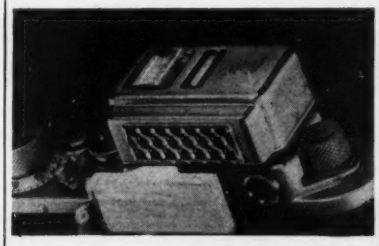
The Model B (*shown*), with an f/2.8 coated lens and Velio shutter, has speeds of 1/10th, 1/25th, 1/50th, 1/100th, 1/200th, and bulb. This model is priced at $37.95.

An Eveready carrying case is available at $6.95, and a B.C. flashgun is priced at $5.50. For additional information, write:

WIRGIN BROS. CAMERA WORKS
705 BRONX RIVER RD.
BRONXVILLE 8, N. Y.

Camera-Mounted Meter

The Sixti is a reflected as well as incident light photoelectric meter which can be either mounted on certain 35mm cameras or handheld for use with any camera. An adjustable shoe permits the meter to be mounted on the accessory clip of a Leica, Contax, Retina, or similar camera. The Sixti's honeycomb



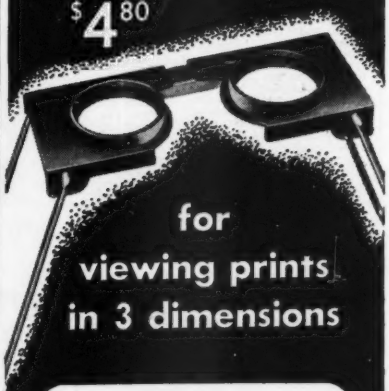
lens and baffle limit the angle of light acceptance to that of standard camera lenses. The meter adjusts to the correct sensitivity range for high and low

(*Continued on page 26*)

NEW PRODUCT
Hugo Meyer

POCKET STEREO

$4.80

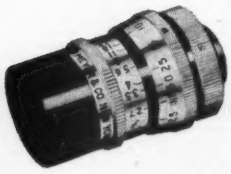


for viewing prints in 3 dimensions

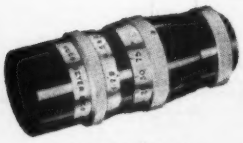
New Low Prices

Meyer-Opticraft

MOVIE LENSES



1½" f:2.7 Trioplan
8mm 3X telephoto — $39.00



3" f:2.8 Trioplan
16mm 3X telephoto — $58.00

HUGO MEYER RANGEFINDERS

POCKET	for roll film and movie cameras	$9.90
COUPLED	for plate and press cameras	$28.50
FIELD	precision measurements up to 100 ft.	$32.50

Meyer-Opticraft INC.
39 W. 60th St., New York 23, N.Y.

Customer Satisfaction Assured
All Merchandise Guaranteed

WESTEN'S

Convenient Credit Terms For
Service Men—Home or Abroad

Every Item Advertised in stock • BRAND NEW • Guaranteed Deliveries

USE OUR TIME PAYMENT PLAN AND BUY

Linhof SUPER TECHNICA 4 x 5

LATEST MODELS • BRAND NEW

OUTSTANDING FEATURES: Multifocus Rangefinder • Tilting and Swinging Back • Revolving Back • Triple Extension Bed • Drop Bed • All Lenses Coupled to Rangefinder • INTERNATIONAL BACK* and Ektalite Screen (Accepts all film accessories including Polaroid, Grafmatic, and Roll Film Holders)

Recognized Linhof Specialists!

New, Fully Synchronized MX Shutters up to 1/500 second.

Your choice of color! Linhof Super Technica is available in black, maroon, grey, or white.

4x5 LINHOF OUTFITS

[Price at right includes camera with lenses (√)]

	127mm f4.7 Xenar 1/500 MX	135mm f3.8 Xenar 1/400 MX	150mm f4.5 Xenar 1/400 MX	90mm f6.8 Angulon 1/500 MX	240mm f5.5 Xenar 1/400 MX	360mm f5.5 Xenar 1/100 X	PRICE	Pay Down
One Lens Outfits	√						$359.75	$35.98
			√				389.70	38.97
		√					398.75	39.88
Two Lens Outfits	√			√			437.50	43.75
			√	√			467.45	46.75
		√		√			439.55	43.96
Three Lens Outfits	√			√	√		561.95	56.20
		√		√	√		600.95	60.10
			√	√		√	656.95	65.70
		√		√		√	666.00	66.60

Multifocus Viewfinder $84.00—*New International Back, $30.00 additional—All lenses coated—Other combinations on request.

Linhof 2¼ x 3¼ $57.50 DOWN

Complete 3 Lens Outfit

With all the outstanding features of the Linhof 4 x 5

INCLUDES Linhof 2¼ x 3¼ Camera
65mm f6.8 Wide Angle Angulon Lens
105mm f3.5 Schneider Xenar Normal Lens
180mm f5.5 Tele-Xenar Telephoto Lens

All in fully synchronized MX Compur Rapid Shutter to 1/500 sec. All lenses coupled to rangefinder. Including Linhof Holder

$575.00

GI ORDERS GET THE GREEN LIGHT AT WESTEN'S

German Made

SAVE $30

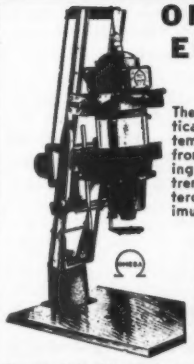
New REFLEKTA II "SV"

Full M-X Flash Synchronization!
9 Shutter Speeds! Self Timer!

New 2¼ x 2¼ Reflekta II featuring the Prontor "SV" Shutter offering 9 speeds from 1 second to 1/300 seconds and bulb—matched f3.5 coated and color corrected lenses—fingertip focusing, aided by built-in magnifier—body shutter release with provision for cable release—double-exposure prevention device—self-erecting hood will convert to Direct Sportsfinder—beautifully finished all metal construction.

Reflekta II "SV" with f3.5 lens	$ 79.50
Deluxe Eveready case	8.50
BC Flash Gun complete with reflector, cord, and bracket	15.95
Regular Retail Price	$103.95

WESTEN'S SPECIAL $73.95



OMEGA D-2 ENLARGER $159.40

The only enlarger with an optically perfect enlarging system for every negative size from 4"x5" to 35mm! Matching condensers provide extremely even illumination, interchangeable lens for maximum enlargements.

OMEGALITE

Finest diffused illumination especially recommended for portrait work, when less contrasty light source is required.

Omega D-2 with Omegalite	$159.40
Omegalite Head Separate	42.75
Omega D-2 with condenser head	168.50
Omega D-2 with condenser and color head	183.50
Auto Omega B5—2¼x3¼	129.50
Omega B6—2¼x3¼	99.50
Auto Omega E4 Professional—5x7	315.00

DECEMBER SPECIALS!

All Brand New

	Regular	Special
Exakta VX f1.9 Xenon click stops	$326.50	$249.00
Auto Rolleiflex f3.5 Tessar, case	285.00	195.00
Reflecta Jr. f3.5 Sync.	40.00	29.95
135mm Zeiss Triotar f4 for Exakta	75.00	59.50
500mm Astro tele for Exakta	395.00	295.00
Primar Reflex II f3.5 Tessar	295.00	179.00
4x5 B & J Press R.B. f4.5	140.00	99.00
Quick Set Sr. Elev. Tripod, with head	47.00	35.00
270mm Tele Xenar for 4 x 5 in Compur Sync.	149.00	114.95
DeJur 8mm Mag. Fadematic f2.5	127.50	97.50
Iloca Stereo, latest, f3.5	125.00	99.00
Golde 35mm Manumatic 300 watt projector	58.50	47.50
90mm Leitmeyer W.A. f6.8 MX for 4 x 5	60.00	39.50
360mm Tele Xenar for 4 x 5 in barrel	119.95	99.50
Master Reflex 2¼" w/ f3.5 Meyer	185.00	135.00

Items listed in this column available on cash basis only. First come—First served!

Our Time Payment Plan
ONLY 10% DOWN
Send 3 credit references with order

HIGHEST TRADES GIVEN

© Copyright

Westen's
802 STATE STREET
TELEPHONE 2-9181 SANTA BARBARA, CALIFORNIA

• CHECK WITH ORDER SPEEDS DELIVERY •

GI HEADQUARTERS for CAMERAS and Photographic Equipment

Are your shots like this

instead of like this?

One of the problems of indoor movies is to get the whole scene in without wobbly panoraming.

The room is usually too small to back up far enough to get the entire picture with a standard lens.

The answer is the Elgeet 7 mm f:1.9 wide-angle lens that can gather in the entire scene, by covering *4 times* the area of your standard lens!

Also, it's an extra-fast lens—solves the problem of poor lighting conditions.

List price only **$63.20** *(tax included).*

For better indoor movies than ever before, see your dealer *now!*

Elgeet OPTICAL COMPANY, Inc.
834 SMITH ST., ROCHESTER 11, N. Y.

MAKERS OF
The World's Finest Lenses

NEW PRODUCTS

(Continued from page 24)

intensities of light by means of an automatic switch. A built-in magnifier permits easy-to-read shutter speed-aperture settings. The Sixti, from Western Germany, measures 2⅛ x 1⅜ x ⅞ in. Price, with leather case, $23.95. For more information, write:
PHOTOPTIC CORP.
235 FOURTH AVE.
NEW YORK 3, N. Y.

TDC Stereo Project-or-View

Functioning as a combination stereo slide viewer and projector, the new TDC Project-or-View accommodates stereo slides in either cardboard or glass mounts. When used as a viewer, the unit shows the images on an 8 x 10

in. viewing glass. For projection, a rear panel swings open enabling the image to fill a screen up to 40 x 40 in. Controls are simple: no adjustments are required between slides (providing they've been correctly mounted).

Blower-cooled, the Project-or-View incorporates two 300-watt lamps, a twin reflector, condenser, and heat filter system, and is said to provide exceptionally cool operation.

The Project-or-View has matched three-inch f/3.5 coated anastigmat lenses. It measures 18 x 11 x 16 in., weighs 15 lbs. AC only. Price, $149.50. A luggage-style carrying case is priced at $20.00. For additional information, write:
THREE DIMENSION CO.
4555 W. ADDISON ST.
CHICAGO 41, ILL.

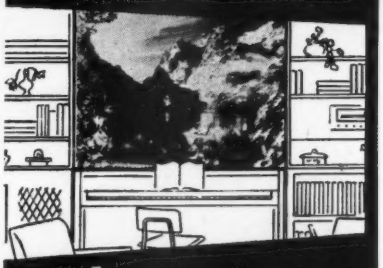
Electronic Flash Batteries

Reductions in size and weight of portable electronic flash units have been made possible by two Eveready photoflash batteries. Delivering 240 volts, the Eveready No. 491 measures 2 19/32 x 1 5/16x 4 7/16 in., weighs 13 oz. Some electrical flash units will require two of these batteries. Others, having a voltage-doubling circuit, will need one.

The Eveready No. 497, giving 510 volts, measures 3 x 1 19/32 x 5⅝ in., weighs 1 lb. 10 ozs. This battery gives

(Continued on page 31)

Make your PLAY room
...a GAY room with
HAND COLORED PHOTO MURALS



The most "lived in" room in your home, large or small, is the family playroom. Why not brighten it with a striking photo-mural which pictures your favorite vacation spot . . . recapture the happy moments you and your friends remember well. It's so easy to color a matte or semi-matte enlargement with Marshall's Photo-Oil Colors. You'll be amazed by the sparkling "showplace" transformation a Marshall photo-mural makes in a room.

Remember, you can also add sparkle to any corner of your home by mounting your personalized hand-colored photos on lampshades, table tops, magazine racks, paper baskets and dozens of other places. It's great fun . . . it's a wide awake, imaginative decorating note your friends will enjoy and talk about.

Wake up your
ALBUM *with* COLOR!
It's creative . . . It's fun . . . It's easy . . . It's economical . . .

You're proud of your family . . . proud of the places you've been . . . proud of your handiwork. NOW, be proud of the wonderful color prints in your family album . . . photographs you hand-colored yourself the easy Marshall way.

Marshall's is an economical process used by thousands to add color to low cost black-and-white photos. Colors are applied with tufts of cotton; details with cotton-tipped skewers. The colors are transparent. Tones of the print shine through, giving the appearance of colored objects in light and shade. No artistic ability is needed for perfect results. You can always correct colors while working.

the only photo-oil color backed by over 30 years of research...a **tool**...not a toy!

A price for every purse, $1.50 to $13.95

There's a Marshall Photo-Oil Color for every need . . . for military uniforms, ask for Marshall's Air Force Blue, Khaki and Navy Blue. FREE! Ask for Marshall Rainbow Color Chart at your dealer!

the most popular color process of all!

MARSHALL'S PHOTO-OIL COLORS

John G. Marshall Mfg. Co., Inc. Dept. C1, 167 N. 9th St., Bklyn 11, N. Y.
Can. Dist.: Canada Photo Products, Ltd., 137 Wellington St. West, Toronto 1
Export Dist.: Cinetel International Corp., 303 W. 42 St., New York 36, N. Y.

Choose FROM THE THOUSANDS OF CAMERAS, ENLARGERS, PROJECTORS AND ACCESSORIES AT UNITED'S BOTH STORES .....

Compare AND $AVE

SAVE 30% on BRAND NEW TRIPODS FOR STILL or MOVIES COMPLETE WITH PAN HEAD

STAR-D MULTI-CAM TRIPODS

D-17 2 Section Height 60" Closes to 38" ..... $ 9.65
D-18 3 Section Height 58½" Closes to 25½" 10.95
D-19 4 Section Height 52¼" Closes to 20" 12.25

ALL Models are Compact. Easy to carry, only 3½ lbs. with Rubber tips. Built in leg stops. Precision machined aluminum alloy with bronze bushing—lubricants are sealed in forever.

FLASH SPECIAL
$49.50 Value

BRAND NEW TELEPHOTO LENS FOR CONTAX S & D Models PRAKTICA, PRAKTIFLEX FX AND PENTACON CAMERAS

ONLY $24.95

- Will. Wetzlar 105mm f4 Telenar Coated.
- CHROME FINISH • Focusing Mount

SAVE $36.00. ON DEMONSTRATORS

ILOCA STEREO II

ONLY $89.00

- Matched Coupled f3.5 Ctd. lenses.
- Synchronized Shutter.
- Mfg's List Price $125.00.

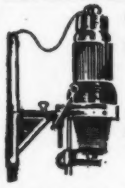
New Eveready case for above..... $9.89
BC Flash Gun Clip on Type for above 6.95

SAVE $16.50

VU-AID PROJECTOR OUTFIT

- 200 watt Blower Cooled.
- For 2x2" Slides.
- In Self Contained Carrying Case.
- f3.5 Ctd Projection Lens
- INCLUDING 40x40 FAMOUS BRAND TRIPOD SCREEN.
- INCLUDING 2x2 ALL METAL FILE BOX
- VERIFIED VALUE $48.85.

Only $32.50



Drastically Reduced!

Brand New LATEST Model

FOTO-LARGERS

You Will Recognize the NEW Deluxe 2¼ x 3¼ Models by the Red Bellows and Satin Trim

For Negatives to 2¼ x 3¼	Model D Diffusion	Model C Double Condensers
Less Lens	$19.00	$24.95
with 3½" Acromatic f6.9	22.35	27.95
with 3½" Ctd. Elgeet f4.5	30.59	35.95
Supplied with Negative Carrier—specify size.		
Extra Negative Carriers	each	$ 2.75
Counterbalance for 2¼ x 3½ Models		3.99
Copy Back		7.19
Copy Lights (less bulbs)		12.75

For Negatives to 4 x 5	Model D Diffusion	Model 100 C Double Condensers
Less Lens	$36.95	$52.95
with 5¼" Ctd. Elgeet f4.5	58.95	74.95
Supplied with Negative Carrier—specify size.		
Extra Negative Carriers	each	$ 4.39
#100 Counterbalance for 4 x 5 Models		4.29
Copy Back		11.95
Copy Lights (less bulbs)		14.35

Note: Condenser Models are furnished with Interchangeable Diffusion System

UNITED AGAIN OFFERS FOR A XMAS HIGHLIGHT

Genuine ROBOT STAR CAMERAS

- **Latest Imports.**
- **Brand New.**
- **All Prices Reflect Great Savings.**
- **Built in Rewind Mechanism.**

Robot Star Camera f1.9 Schneider Xenon Ctd. lens $196.50
Robot Star Camera f2.8 Schneider Xenar Ctd. lens $169.50
Robot Star Camera Less Lens $114.50

Lenses for Robot Star Cameras and Model II

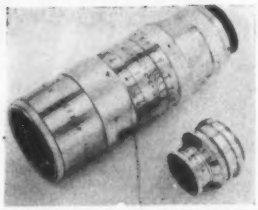
30mm f3.5 Schneider Wide Angle Xenagon Ctd. lens 79.50
75mm f2.8 Schneider Tele-Xenar Ctd. Telephoto lens 59.50
150mm f4.5 Schneider Tele-Xenar Ctd. Telephoto lens 119.50

ACCESSORIES FOR ABOVE CAMERAS AND ROBOT 11

Eveready Case 11.95
Case for Xenagon, Xenon and Xenar lens 3.75
Case for 75mm lens 5.75
Finder mask for 3" lens 2.75
"N" Take Up Cassettes 3.95
"T" Supply Cassettes 3.95
Universal View Finder 39.50
"Quick Change" Daylight Rewinder 5.03

MOVIE LENS SPECIAL
NOW AVAILABLE FOR

***BELL & HOWELL 8mm Camera Owners as well as ALL OTHER CAMERAS 8mm with STANDARD D MOUNTS. AND 16mm CAMERAS WITH STANDARD "C" MOUNTS.**



IMPORTED TELEPHOTO AND WIDE ANGLE LENSES. PRICED RIGHT FOR XMAS GIVING. SAVINGS TO 33⅓% on BRAND NEW LENSES.

Normal 8mm Lens.

½" f1.9 Focusing Mount 1" to Inf. Click Stops $22.50

Telephoto 8mm Lenses.

1" f3.5 Fixed Focus. D Mount ..... $ 7.37
1½" f3.2 Fixed Focus. D Mount 9.85
*1½" f3.2 3' 6" to Inf., Click Stops 13.65
*1½" f2.5 3' 6" to Inf., Click Stops 20.50
*1½" f1.9 3' 6" to Inf., Click Stops 29.95
1½" f1.5 3' 6" to Inf., Click Stops 32.35
1½" f1.4 3' 5" to Inf., Click Stops 37.50

Wide Angle Lenses

*7mm f2.5 Fixed Focus, Click Stops 19.00
*6mm f1.9 Fixed Focus, Click Stops 30.50

For 16mm Cameras with C Mounts

17mm f2.7 Wide Angle 10" to Inf. 27.95
3" f3.5 Telephoto 3' 5" to Inf. Click Stops 27.95
3" f2.5 Telephoto 5' 5" to Inf. Click Stops 33.95
3" f1.9 Telephoto 4' to Inf. Click Stops 37.50

USED CAMERAS AT SPECIAL XMAS CLEARANCE PRICES

Robot II w/ f1.9 Xenon Lens ..... $ 59.50
Robot I w/ f3.5 Primotar Lens 42.50
Contax S w/ f2 ctd Biotar 159.50
Leica Model IIIC f2 ctd Summitar 164.50
120 Zeiss Ikonta C f4.5 Novar 29.50
Ansco Speedex Special f4.5 Synchro 27.95
Super Ikonta B f2.8 ..... 74.50
Kodak Medalist II f3.5 ..... 149.50
Kodak Signet f3.5 Synchro 57.50
Ciroflex Model B f3.5 ..... 39.50
Argoflex EF f4.5 Synchro 39.50
Bolsey Model C Reflex f3.5 ..... 66.50
Ansco Regent f3.5 full Synchro 42.50
Ikonta 35 f3.5 SV shutter 42.50
Retina II f2 ctd Synchro 74.50
Retina IIA f2 ctd latest 99.50
Primar Reflex II f3.5 C.Z.T. 149.50
Kodak 35 f3.5 R.F. Synchro 39.50

ACCESSORIES AT REDUCED XMAS PRICES

35mm f2.8 Biogon for Contax II, III $109.50
50mm f3.5 Tessar Lenses for Contax 29.50
85cm f2 ctd Sonnar for Contax IIA, IIIA 129.50
85mm f4 Triotar for Contax II, III 69.50
New 135mm f4.5 Albinar for Kine Exakta 21.95
35mm f3.5 Summaron for Leica Used 67.00
90mm f4 Elmar chrome for Leica Used 67.00
135mm f4.5 Hektor black for Leica 69.50
David White SP-62 Stereo Viewer 6.95
Prazisa Range Finder w/ case feet or meters 3.95
Kopil Self Timer for all cameras 2.29
Airequipt Slide Changer for all projectors 10.95
Airequipt Magazines for above changer 1.69

IN TIME FOR XMAS

"BUY OF THE YEAR"
SAVE $25.50
BALDINETTE II OUTFIT
Only $49.50

- 35mm Baldinette II Camera.
- Coated f3.5 Schneider lens.
- Fully synchromatic Shutter MX.
- Shutter speeds from 1 sec to 1/300th.
- Built in Self Timer.

CAMERA OUTFIT IN ATTRACTIVE GIFT CARTON includes

1. Baldinette II Camera.
2. Leather Eveready Case.
3. Battery Power Flash Gun w/ Battery.
4. Brand New Reg. $75.00.

SAVE $48.35
BRAND NEW XMAS PLUS PACKAGE DEAL ON THE NEW 1953 PRAKTICA FX ONLY $124.00

Outfit Consists of: 1953 Praktica FX W/Will. Wetzlar f2.8 50mm Ctd. Lens. Plus case. Plus Sun Telephoto lens f4 90mm. Plus Flashgun BC type.

All prices listed are F.O.B. New York City. C.O.D. orders require a deposit of 10%. Please include shipping charges with all orders. Overpayments will be cheerfully credited.

SEND FOR OUR NEW BARGAIN CATALOG

UNITED CAMERA EXCHANGE

1140 Avenue of Americas
(Corner 44th Street)
New York, N. Y.
MU 2-8574

83 Chambers Street
New York 7, N. Y.
DIgby 9-3555
Mail Order Div

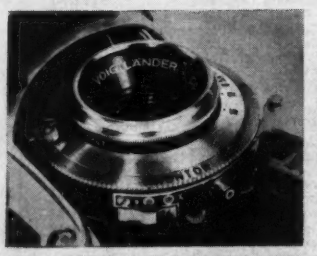
...and now fully Synchronized...

AT NO INCREASE IN PRICE

Voigtländer VITO II

35 mm precision camera

In addition to the deluxe features only found in higher priced cameras, the Vito II, with its Color-Skopar f3.5 lens remarkable for sharpness is now FULLY SYNCHRONIZED.



WITH PRONTOR - SV
Full Sync. Shutter; Speeds 1 second to 1/300th; built-in self timer.
$54.50

WITH COMPUR-SYNCHRO
M-X Full Sync. Shutter; Speeds 1 second to 1/500th.
$61.25

Here are some of its outstanding features:

- Fully Synchronized
- Automatic Locking Device
- No Double Exposures
- No overwinding
- Automatic Counting Device
- Depth of field scale
- Hinged back facilitates loading
- Special shutter release eliminating camera movement
- Direct View Optical finder
- Sturdy, compact, streamlined
- Black leather covered
- Satin chrome finish
- Weighs only 16 ounces

Willoughbys

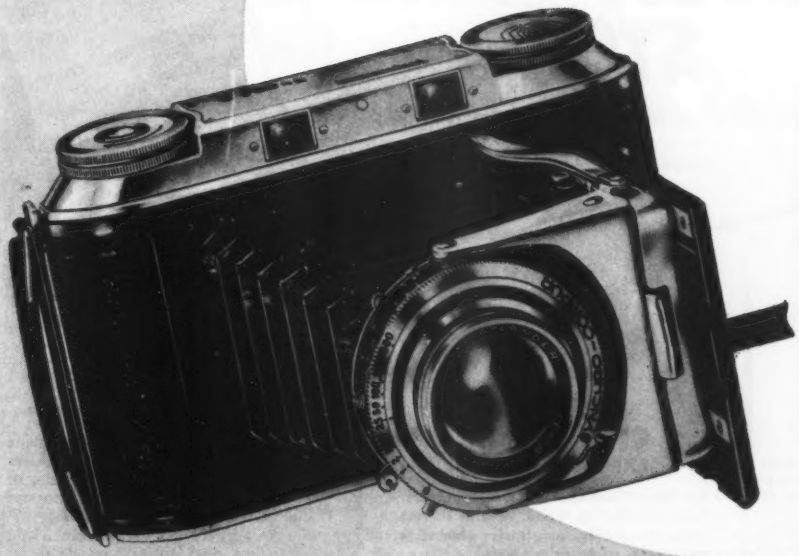
WORLD'S LARGEST CAMERA STORE
110 West 32nd Street • 113 West 31st Street
New York 1, N. Y. • LOngacre 4-1600

Voigtländer

SINCE 1756

the camera with the world famous lens

Voigtlander cameras and lenses are really made for each other; all the designers and craftsmen building them work under one roof. And that explains the high performance. They are also very simple to use and practically foolproof.



Ever since the invention of photography, Voigtlander lenses have been among the best in the world. The new Voigtlander high-class anastigmats have reached a level of technical performance — especially for color shots—which was unknown a few years ago.

Voigtländer *rangefinder 2¼ x 3¼*

BESSA II

This smart, beautifully shaped camera with its precision telemeter finder (combined viewfinder-rangefinder) is the model for the amateur pictorialist who prefers a larger picture size.

It is the only camera equipped with the new high-efficiency anastigmat COLOR-HELIAR f3.5 (or COLOR-SKOPAR f3.5) and possesses a range of high-class technical features: Compur Rapid shutter with self-timer, fully synchronized for flash, depth-of-field ring, all parts conveniently located for quick operation, all scales visible from above.

With Color-Skopar f3.5 lens in Compur Rapid fully synchronized M-X shutter, 1 sec. to 1/500th; built-in self-timer **$124.50**

With Color-Heliar f3.5 lens in Compur Rapid fully synchronized M-X shutter, 1 sec. to 1/500th; built-in self-timer **$168.50**

Mail orders filled. Add postage.

world's largest camera store *Willoughbys*

110 West 32nd Street • 113 West 31st Street
New York 1, N. Y. • LOngacre 4-1600

Choose Your Gift at the

WORLD'S LARGEST CAMERA STORE

Wonderful Values to fit every need and every purse

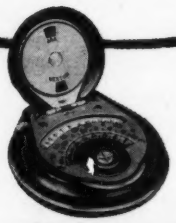
We list below but a few of the many wonderful buys. Come in or order by mail and we will ship your order promptly.

MAGICASE

Soft, luxurious . . . Made from superb top-grain saddle leather, both inside and outside. All locks, zippers and hardware are solid brass.

MODEL	for	List Price	Our Price
1500	35mm Cameras	$9.95	$6.75
1501	2¼ x 3¼ Roll Cameras	$11.95	$8.95
1502	2¼ x 2¼ Reflex	$14.95	$9.95
1503	Up to 4 x 5 Press Camera	$19.95	$13.45

(No outside pocket)



CHROSTAR
EXPOSURE METER

for still or movies, indoors or outdoors, Color or Black & White. Assures correct exposure quickly, accurately—eliminates guesswork, tricky calculations.

with lapel chain . . . **$22.95**

PROXIMETER
For Close-up Photography

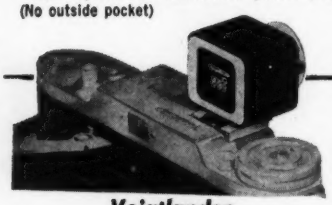
Attaches to lens like a filter—fastens securely by means of lock-screw. Uses the regular rangefinder-viewfinder of your 35mm camera as under normal conditions.

Model I is for distances from 38 to 20 inches, and Model II for distances from 20 to 13 inches. The combination of the two models brings the distance down to 10 inches.

PRICES:

Proximeter I or II for:

Retina	$24.95
Kodak Signet	19.95
Vito III	21.95
Prominent	26.50
Contax	40.50
Leica	30.50
Bolsey B2	19.95
Argus C3	24.95
Vitessa	26.50
Contessa	30.50



Voigtlander
KONTUR
Sportsfinder
VIEWFINDER

- No eye strain — no squinting
- Spots still or moving objects in full size.
- Shows completely composed picture with faithful accuracy.
- Has fitting to attach to standard shoes.

35mm, 2¼ x 2¼, 2¼ x 3¼ } **$8.50**

Clip-on adapter for Voigtlander camera not equipped with shoes. **$1.50**

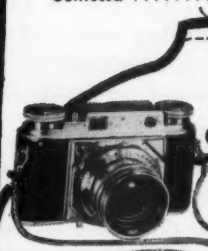
New Channel-Type All Aluminum
"PROFILE" NO. 1
Special Tripod

Lightweight, easy adjusting, extra sturdy, plus precision workmanship. 3-section legs extend to 61 inches high; closed, 25 inches. Handy knurled knobs lock legs securely in any position. Convertible tripod screw for American or foreign cameras. Non-skid, sure-grip rubber-tipped legs. Weighs only 3½ pounds, but will hold the heaviest of cameras.

$16.95

Reversible Center Post; adds about 10 extra inches to tripod **$8.75**

Junior Pan and Tilt Head; with long convenient handle **$9.95**



CHROME NECK CHAIN

Beautiful workmanship. Has swivel rings with positive screw-locks. Rubber grommets give camera extra protection. Measures 36" long. **$3.95**

MAIL ORDERS FILLED ADD POSTAGE

Willoughbys

110 West 32nd Street • 113 West 31st Street
New York 1, N. Y. • LOngacre 4-1600

STEREO-TACH

CONVERTS REGULAR CAMERAS TO 3-D FOR LESS THAN $30.00

IMAGINE! TAKING FULL COLOR ACTION SHOTS IN 3-D with your present camera. Well, it's yours to do with *Stereo-Tach* . . . the lens accessory that is revolutionizing picture taking. Think of it! For less than $30.00 you can turn your standard camera into a stereo camera. There's nothing new to learn, no complicated transposing. If you can click a shutter, 3-D is yours with *STEREO-TACH.*

SLIDE OUTFITS $29.85 and $24.90 • PRINT OUTFITS $24.90

SEE YOUR DEALER TODAY or write mfr.

ADVERTISING DISPLAYS, INC.
419 Pike Street, Covington, Ky.

FASTEST HYPO NEUTRALIZER, SAVES UP TO 80% IN TIME AND WATER

Use BFi No. 30 hypo neutralizer on your next batch of film or prints. See for yourself how it can save you up to 80% in time and water—and can save you money. What's more, prints and film are really clean. There's no fading, no discoloration. Prints tone evenly, take on true color every time. **Better try BFi No. 20, too,**—prints lie flat, stay flat because of controlled moisture balance.

BFi BROWN-FORMAN INDUSTRIES
LOUISVILLE 1, KENTUCKY

NEW PRODUCTS

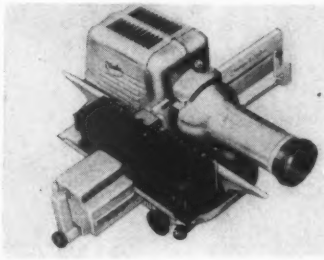
(*Continued from page 26*)

more than twice the voltage of its predecessor, the No. 492, in half the weight and size.

Price, No. 491, $7.95; No. 497, $15.95. For additional information, write:
NATIONAL CARBON CO.
30 E. 42ND ST.
NEW YORK 17, N. Y.

Viewlex Slide Changer

The Viewlex Change-O-Matic is a semi-automatic slide holder and changing device that facilitates slide projection. The unit fits into the Viewlex projector (*as illustrated*) and accommodates 2 x 2 slides in any mount. These are stored in a polystyrene tray. A push-pull motion of the slide changer



positions each slide for projection and returns the previously viewed slide to the tray.

Another Viewlex product, a stereo slide carrier, fits any 2 x 2 or 2¼ x 2¼ Viewlex projector. This manually operated carrier also accommodates any kind of mount and shows *one* of a pair of stereo slides.

Price of the Change-O-Matic is $14.95. Extra polystyrene trays are $1.45 each. The stereo slide carrier is priced at $9.50. For additional information, write:
VIEWLEX, INC.
35-01 QUEENS BLVD.
LONG ISLAND CITY, N. Y.

Spiratone Auxiliary Finders

Two auxiliary finders—telephoto and wide-angle—show the field of view of camera lenses when used in conjunction with Spiratone auxiliary telephoto

and wide-angle lenses. The finders fit the accessory clips of most German cameras such as the Retina, Vito, or

(*Continued on page 34*)

SAVE UP TO 60%!

MINIATURE CAMERAS:

Mercury II, ctd. 2.7 Synch. 1/1000	$ 27.50
Karat II, Xen. 2.8, Cpld. Rf., l. n.	39.50
Vito, ctd. Col. Sk. 3.5, M-X Synch., l. n.	45.00
Argus C-4, ctd. 2.8, Synchro, like new	52.50
Robot IIA, ctd. Biotar F:2, MX-Syn. l. n.	99.50
Stereo Realist, ctd. 3.5 lenses, Syn., l. n.	99.50
Vito III, Ultron F:2, M-X, like new	99.50
Retina IIA, ctd. Xenon F:2, M-X Syn., l. n.	109.50
Contessa T-ctd. Tess. 2.8, M-X, Exp. M., l. n.	119.50
Kine Exakta II, T-ctd. Biotar F:2, l. n.	139.50
Omnica case for Kine Exakta, like new	39.50

LEICA, CANON, NICCA:

Leica A, Elmar 3.5, like new	$ 39.50
Canon IIIB, ctd. Serenar 1.8, like new	149.50
Canon IV-S-2, ctd. Seren. 1.8, Full Syn., l. n.	215.00
Leica C, coated Elmar 3.5, like new	109.50
Same, coated Summitar F:2, like new	149.50
Leica IIIC, coated Elmar 3.5, like new	139.50
Same, coated Summitar F:2, like new	179.50
Same, coated Summarit 1.5, like new	225.00
Leica IIIF, latest, ctd. Summit. F:2, l. n.	229.50
Same, coated Summarit 1.5, like new	275.00
Same, coated Summicron F:2, like new	289.50
Nicca III, coated Nikkor 1.4, like new	179.50
Ctd. Sumnaron 3.5, 35mm, chrome, like new	69.50
Ctd. Serenar 3.2, 35mm, chr., l. n., case, fin.	79.50
T-ctd. Biogon 2.8, 35mm, ltwt., like new	95.00
Ctd. Elmar 3.5, 50mm, chrome, like new	45.00
Ctd. Summitar F:2, 50mm, chrome, like new	85.00
Ctd. Summicron F:2, 50mm, chrome, like new	145.00
Ctd. Nikkor 1.4, 50mm, chrome, like new	149.50
Ctd. Summarit 1.5, 50mm, chrome, like new	129.50
Ctd. Elmar F:4, 90mm, chrome, like new	69.50
Ctd. Culminar 4.5, 135mm, ltwt., like new	49.50
Ctd. Hektor 4.5, 135mm, blk. & chr., like new	79.50
Ctd. Hektor 4.5, 135mm, chrome, like new	109.50
Tewe Zoom Finder, $29.50; Leitz Imarect, l. n.	32.50
Leitz Nooky for Elmar, like new	29.50
Omnica case for Leica and access., like new	39.50
Leitz all-metal cassettes, new type, l. n., ea.	2.25

CONTAX, NIKON:

Contax IIA, T-ctd. Sonnar F:2, like new	215.00
Same, T-ctd. Sonnar 1.5, like new	239.50
Same, coated Nikkor 1.4 like new	265.00
Contax III, Sonnar F:2, like new	139.50
Same, Sonnar 1.5, like new	159.50
Same, coated Nikkor 1.4, like new	209.50
Contax IIIA, T-ctd. Sonnar F:2, like new	265.00
Same, T-ctd. Sonnar 1.5, like new	289.50
Same, coated Nikkor 1.4, like new	315.00
Nikon, coated Nikkor 1.4, Synchro, like new	189.50
Ctd. Nikkor 3.5, 35mm, chrome, NEW	69.50
T-ctd. Biogon 2.8, 35mm, chrome, like new	95.00
T-ctd. Optar Biogon 2.8, 35mm, f. IIA, NEW	169.50
T-ctd. Tessar 4.5, 40mm, f. Contax D, NEW	59.50
Ctd. Nikkor 1.4, 50mm, chrome, like new	149.50
Triotar F:4, 85mm, chrome, like new	59.50
Ctd. Nikkor F:2, 85mm, chrome, like new	109.50
T-ctd. Sonnar F:2, 85mm, ltwt., NEW	129.50
T-ctd. Sonnar F:4, 135mm, ltwt., NEW	119.50
Sonnar 2.8, 180mm, chrome, like new	195.00
T-ctd. Biotar 1.5, 75mm, f. Contax D, NEW	149.50
Contameter f. Contax II, like new, case	49.50

HIGHEST CASH PRICE OR LIBERAL TRADE-IN ALLOWANCE FOR YOUR USED CAMERA, LENSES AND EQUIPMENT.
WRITE TODAY for FREE ESTIMATE!!!

REFLEX CAMERAS:

Graflex 4 x 4 (Conv. 4 x 5), K. A. 4.5, l. n.	$ 29.50
Auto Graflex 3¼x4¼, B&L Tes. 4.5, F. P. A.	35.00
Hiroflex, 122mm, Tessar 4.5, l. n., F. P. A.	59.50
Rollicord IIA, T-ctd. Trio. 3.5, Synch., l. n.	69.50
Stand. Rolleifl, crank oper., Tess. 3.5, l. n.	69.50
Rolleicord III, coated Xenar 3.5, NEW	85.00
RB Graflex D, 3¼x4¼, ctd. Ross 3.5, l. n.	89.50
Auto-Rollei, Tessar 3.5, like new	95.00
Same, ctd. Xenar 3.5, Reiland Solenoid, l. n.	119.50
1953 Auto-Rollei, ctd. Xen. 3.5, M-X, used	159.50
Same, T-ctd. Tessar 3.5, M-X, used	175.00
Auto-Rollei 2.8C, ctd. Xenotar 2.8, used	289.50
Omnica case for Rolleiflex & access., l. n.	39.50

ROLL FILM AND PRESS CAMERAS:

Monitor 620, 4.5, Supermatic, like new	$ 35.00
Bessa II, ctd. Col. Skop. 3.5 (X), like new	59.50
Same, ctd. Color Heliar 3.5 (X), like new	85.00
Super Ikonta B. S. W., Tessar 2.8, like new	95.00
Same, T-ctd. Tessar 2.8, Synchro (X), like new	119.50
Sup. Ikonta C Sp'l., T-ctd. Tes. 3.5 (X), l. n.	99.50
3¼x4¼ Ann. Sp. Graphic, ctd. Ek. 4.7, KRF, l. n.	99.50
4x5 Busch, ctd. Ektar 4.7, Vuefocus, like new	109.50
Medalist II, coated Ektar 3.5, Synchro, l. n.	129.50
Crown Graphic 4x5, latest, Tess. 4.5, l. n.	149.50
Same, ctd. Ekt. 4.7, Sup. (X), l. n.	149.50
Linhof Multifocus Finder, like new	59.50

MOVIE CAMERAS, PROJECTORS:

Revere 8-63, Mag. Turret, ctd. 1.9, l. n.	$ 99.50
16mm Mag. Cine Kodak, coated 1.9, like new	79.50
B&H Autoload, 16mm Mag., ctd. 2.5, like new	85.00
Cine Kodak K, 16mm, 1.9, like new	75.00
Revere 16mm Sound Projector, like new	225.00
Golde Coronet, 200 W., blower, l. n., case	32.50
TDC "300", 300 Watt, like new, case	29.50
TDC Show-Pak, 300 W., blower, used, case	39.50
TDC Stereo Projector, used	119.50
TDC Stereo Screen 50x50, like new	22.50
Revere 8mm Cine Enlarger, like new	22.50
Kodak 16mm Cine Editing outfit, like new	39.50

LENSES, ENLARGERS:

Ctd. Yvar 2.8, 15mm, C-mount, like new	$ 39.50
Tele-Xenar 3.5, 75mm, chrome, f. Robot, l. n.	39.50
T-ctd. Tele-Xenar F:4, 135mm, f. Kine Ex., NEW	55.00
Ctd. Tele-Xenar 3.5, 360mm, f. Kine Ex., l. n.	105.00
Tessar 4.5, 6", sunk mount, l. n.	22.50
Optar 6.8, 90mm, Graphex, Graflex Sol., l. n.	39.50
Ctd. Angulon 8.8, 90mm, M-X, unused	49.50
Ross Xpres 4.5, 7¼", Bbl., like new	29.50
Graf Super Anast. 4.5, 12½", Bbl., like new	39.50
Goerz Hypar 4.5, 360mm, Barrel, like new	45.00
Graflarger Cold-Lite and Stand, like new	35.00
Focomat IA, coated 3.5, like new	109.50

ACE CAMERA EXCHANGE
136 EAST 58th ST., NEW YORK J-22, N. Y.

Those happy days are only memories, but...

Your Christmas fun will live forever

in pictures flashed with...

IF only photos could have been flashed of Christmas fun fifty years ago . . . how wonderful they would be today!

Impossible then, but now you can preserve every magic moment of your holidays in perfect pictures captured with Sylvania Blue Dot flashbulbs. Even with an inexpensive camera, you can flash sharp, clear pictures with Sylvania's new Bantam 8 bulb. It gives you all the light you need to stop action, yet won't burn out your negatives.

Try dependable Sylvania Bantam 8 bulbs next time you use your camera, and see the wonderful difference they make in your pictures.

SYLVANIA

Sylvania Electric Products Inc., 1740 Broadway, New York 19, N. Y.

Projection Lamps · Superflood Lamps · Super-N-Larger Lamps · Darkroom Lamps

LIGHTING • RADIO • ELECTRONICS • TELEVISION

In Canada: Sylvania Electric (Canada) Ltd., University Tower Bldg., St. Catherine St., Montreal, P. Q.

BROOKS *catalog of better camera buys* **BUDGET TERMS AVAILABLE**

Brooks of San Francisco . . . Headquarters for EXAKTA *Cameras*

Brooks has the largest selection of Exakta cameras and accessories in the West. Only a few of the items can be listed here. Write Brooks for any additional information . . . and when ordering mention this advertisement.

Exakta VX
Now Available
With Rangefinder

EXAKTA VX

Exakta VX with f3.5 Zeiss Tessar	224.00
Exakta VX with f2 Xenon	257.80
Exakta VX with Auto Diaphragm f2.8 Zeiss Tessar	279.80
Exakta VX with Auto Diaphragm, f2 Zeiss Biotar	353.30
New 1954 De Luxe Exakta VX, Pre-Set f2 Zeiss Biotar, Penta Prism finder, built-in rangefinder	400.00
With f1.5 Zeiss Biotar	450.00
New 1953 De Luxe Exakta VX with Pre-Set 50mm f1.5 Angenieux, complete with new Penta Prism finder, built-in rangefinder	442.00
Exakta, f1.9; Xenon auto diaphragm, rangefinder	475.00
Exakta, f2.8 Westanar lens, auto diaphragm, rangefinder	346.50

HIGH SPEED LENSES, COATED

f/1.9, 50mm Schneider Xenon, with click stops	135.00
f/1.5, 75mm Zeiss Biotar	216.50
f/1.8, 90mm Angenieux Type P1	149.50
(COPYSTAND):	
Copy Mat, optical bench system copystand, complete with accessories, Model 1	97.50
Model 2	117.00

BELLOWS EXTENSION APPARATUS

Novoflex bellows extension EBAL (single carriage)	44.50
Novoflex bellows extension EBIG (double carriage)	75.00
f/4.5, 105mm coated Steinheil lens with click stops and adapter to fit the Novoflex	34.50
f/4.5, 135mm Steinheil Culminar telephoto lens (same lens as listed under Telephoto Lenses)	60.00

KINE EXAKTA V (few left)

Kine Exakta V with f/3.5 "T" coated Zeiss Tessar	179.50
Kine Exakta V with f2 "T" coated Zeiss Biotar	229.00

EXAKTA ACCESSORIES

Penta Prism eye-level view-finder	50.00
Penta Prism eye-level view-finder with built-in rangefinder	85.00

Lenses and Accessories (all lenses coated)

Ihagee Magnear, viewfinder for Photomicrography and hyper-close-up photography	25.50
Ihagee Type I hinged microscope adapter, complete set, with 2 extension tubes	29.50
Ihagee Type II two-piece pressure microscope adapter with 2 extension tubes	36.00
Domestic flashgun for Exakta	15.50
Ihagee flashgun for Exakta	30.00
Eyepiece for Penta Prism viewfinder	3.50
Reflex focusing hood	1.50
Eveready Case	12.00

WIDE ANGLE LENSES, COATED

f/3.5, 28mm Angenieux Retrofocus Type R11	120.00
f/2.5, 35mm Angenieux Retrofocus Type R1	99.50
f/4.5, 40mm Zeiss Tessar	99.00
f/4.5, 40mm Hugo Meyer Goerlitz Helioplan	74.50
f/3.5, 40mm Steinheil Cassaron	49.50
f/5.7, 37mm Berthiot	39.95

TELEPHOTO LENSES, COATED

f/2.8, 85mm Steinheil Culminar	68.00
f/2.5, 90mm Angenieux Type Y1	84.50
f/2.8, 100mm Hugo Meyer Goerlitz Trioplan	81.60
f/3.5, 135mm Angenieux Type Y2	75.50
f/4.0, 135mm Zeiss Triotar	75.00
f/4.5, 135mm Steinheil Culminar	60.00
f/5.5, 150mm Hugo Meyer Goerlitz Tele-Megor	55.95
f/5.5, 180mm Hugo Meyer Goerlitz Tele-Megor	82.95
f/5.5, 250mm Hugo Meyer Goerlitz Tele-Megor	132.15
f/5.5, 400mm Hugo Meyer Goerlitz Tele-Megor	199.50

EXA

Exa with waist-level viewfinder and f/2.9 50mm coated Ludwig Peronar lens	89.75
Exa with waist-level viewfinder and f/3.5 50mm T-coated Zeiss Tessar lens	119.75
Leather eveready case for Exa	9.95

EXA VALUE PACKAGE

Exa Peronar	89.75
Eveready case	10.00
BC Deluxe Flashgun	15.50
105mm Steinheil f4.5 telephoto lens	44.50
	159.75
Package Price Save $30.25	129.50

Brooks Cameras, 45 Kearny Street, San Francisco, Calif.
Gentlemen: Please send me:

- ☐ 1954 catalog as soon as published
- ☐ Information on used cameras (new or used) as indicated below:

Model.....

.....

.....

NAME.....

ADDRESS.....

CITY.....

USE YOUR PRESENT CAMERA AS A DOWN PAYMENT ON A NEW 1954 EXAKTA

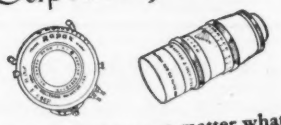
BROOKS *Cameras*

45 KEARNY at MAIDEN LANE
TELEPHONE EXbrook 2-7348
SAN FRANCISCO, CALIFORNIA

MAIL ORDERS SHIPPED SAME DAY RECEIVED

• ANOTHER WOLLENSAK *MASTERPIECE* PERFORMANCE •

The Ability of the Lens to Capture Your Skill



The heart of every camera—no matter what the price—is its lens. A fine lens must deliver sharpness from corner to corner as well as in the center of the film . . . high resolution without the sacrifice of contrast. You can be sure your skill is safeguarded, if your camera is Wollensak-equipped.

Raptar... the MASTERPIECE *of Lenses*

WOLLENSAK

OPTICAL COMPANY • ROCHESTER 21, N. Y.

NEW PRODUCTS

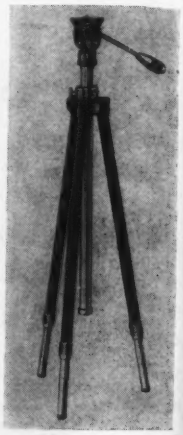
(*Continued from page 31*)

Contessa, or can be handheld. Price, $3.95 each, or $7.49 for both.

An accessory clip which permits the Argus C3 to accommodate the finders is priced at $1. For additional information, write:

SPIRATONE, INC.
49 W. 27TH ST.
NEW YORK, N. Y.

Quik-Set Small Camera Tripod



The new Triplex Quik-Set Tripod and Pan Head is a lightweight, heavy-gauge aluminum tripod designed for use with the average small movie and still camera. Measuring 23½ inches when telescoped, Triplex extends to 52 in. Its center column is held at the desired height by a spring clamp, and the legs, of two-section construction, have no-spread stops to prohibit slipping. Price, $17.95. For additional information, write:

QUIK-SET, INC.
8121 CENTRAL PARK AVE.
SKOKIE, ILL.

Holson Stereo Binders

Heating, pasting, aligning, and sealing problems are eliminated by means of the Holson stereo slide binders. As each film frame is cut, it is slipped into a transparent plastic envelope which is then inserted in a slot on the mount. Alignment for viewing or projection

is accomplished automatically in these steps. Although the film can be removed if desired, it is locked in place when mounted, cannot slip out, and is protected against scratches. Price, in standard black, box of 100, $15.00; in wedding white, box of 100, $16.50. For additional information, write:

HOLSON BINDERS, INC.
762 WYTHE AVE.
BROOKLYN 11, N. Y.

Baia 8- and 16mm Movie Editor

Up to 800 feet of 8- or 16mm film can be accommodated on the new model Baia Standard movie action editor. The editor features one-knob

Announcing FME

The New Two-speed High-fidelity Tape Recorder

$139.95

Lowest-priced two-speed, dual-track tape recorder with so many important features.

FEDERAL MANUFACTURING & ENGINEERING CORP.

Photographic and Electronic Instruments

213 STEUBEN STREET BROOKLYN 5, NEW YORK

New FME

America's Lowest-priced, Two-speed, High-fidelity Tape Recorder

. . . with a full, rich, natural tone that will delight the most discriminating user.

The perfect *ALL-AROUND* Tape Recorder for Home and Business . . .

- **PROFESSIONAL QUALITY**
- **COMPACT AND PORTABLE**
- **PLAYS UP TO 2 HOURS**
- **HIGH FIDELITY—NATURAL TONE**
- **TWO SPEEDS—3¾ IPS, 7½ IPS**
- **SIMPLIFIED OPERATION**

The FME is a fine precision instrument. It is backed by the reputation of FEDERAL MANUFACTURING AND ENGINEERING CORP., the world's largest makers of photographic enlargers and for over a quarter of a century an important supplier to the Government of electronic instruments. Federal's unrivalled facilities and skill alone make it possible to offer this ultimate in recording and play-back value.

FME's choice of two speeds enables the user to switch instantly from voice to high-fidelity music recordings. This feature, coupled with FME's long playing ability (up to two full hours) makes FME the outstanding tape recorder for home and office use.

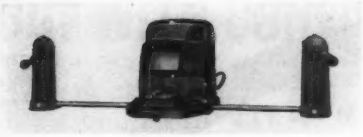
Ask your local dealer to demonstrate the FME Tape Recorder.

Never before a two-speed tape recorder with *ALL* the following features at the low list price of . . . $139.95

DUAL SPEED: 3¾" and 7½" per second. Simple coin-slot type selector effects instant change.
HIGH FIDELITY: At mid-range of tone control, frequency response at 3¾" per second is ± 3 db. from 50 to 7,000 cps; at 7½" per second, ± 3 db. from 50 to 12,000 cps.
MAXIMUM PLAYING TIME: Two hours, using dual track recordings on 7" reel.
SINGLE KNOB CONTROL: Provides simple and easy operation.
AMPLIFIER CONTROLS: Separate volume and tone controls, with full range from bass to treble.
FAST REWIND: 20 to 1 ratio.
FAST FORWARD: Push-button control; 20 to 1 ratio.
SAFETY LOCK: Prevents accidental erasure.
INSTANT STOP LEVER: For editing or dictating. Foot pedal stop switch available as accessory, if desired.
THREADING: Straight in line. Simplest type possible.
MICROPHONE: Ceramic, unaffected by heat or humidity.
RECORDING HEAD: High-fidelity type.
RECORD LEVEL INDICATOR: Neon type shows proper recording level.
PILOT LIGHT: Shows when current is on or off.
ERASE HEAD: Electro-magnetic erase head instantly wipes tape completely clean.
MOTOR: Powerful, constant speed. Perfectly balanced, heavy fly-wheel eliminates flutter.
POWER OUTPUT: 3 watts.
TUBE LINE-UP: 12AX7, 12AU7, 6AQ5, 6X4.
SPEAKER: 5x7 elliptical P.M. speaker.
LINE VOLTAGE: 110/120 volt, 60 cycle AC only.
RADIO-PHONO-TV INPUT JACK: For microphone, or for recording radio programs or TV by means of a patch cord. (Patch cord available as accessory.)
EXTERNAL SPEAKER JACK: Permits operation of external speaker for large audiences, or for ear-phones.
REELS: Uses 3, 4, 5, or 7-inch reels.
OVER-ALL DIMENSIONS: Approximately 14"x12"x8½".
WEIGHT: Approximately 25 lbs.
UNDERWRITERS LABORATORIES APPROVED.

Attractively styled, sturdy two-tone case has hinged, detachable cover and convenient storage compartment which can hold two extra 1250-ft. reels, plus power cord and microphone. (Cover can be closed with 5-inch reels in playing position.) Supplied complete with ceramic microphone, one reel of magnetic tape, one take-up reel, and power cord and plug.

FEDERAL MANUFACTURING & ENGINEERING CORP.
Photographic and Electronic Instruments
213 STEUBEN STREET BROOKLYN 5, NEW YORK



threading, viewing screen, automatic focus, and direct hand-drive rewinds. In addition, the Baia splicer is part of the editing machine's standard equipment. Quick takedown design facilities assembly and storage. It is of die-cast construction. Price, $56.75. A fitted carrying case is available at $7.95. For additional information, write:
BAIA MOTION PICTURE ENGINEERING, INC.
120 VICTOR AVE.
DETROIT 3, MICH.

Tiffen Stereo Safes

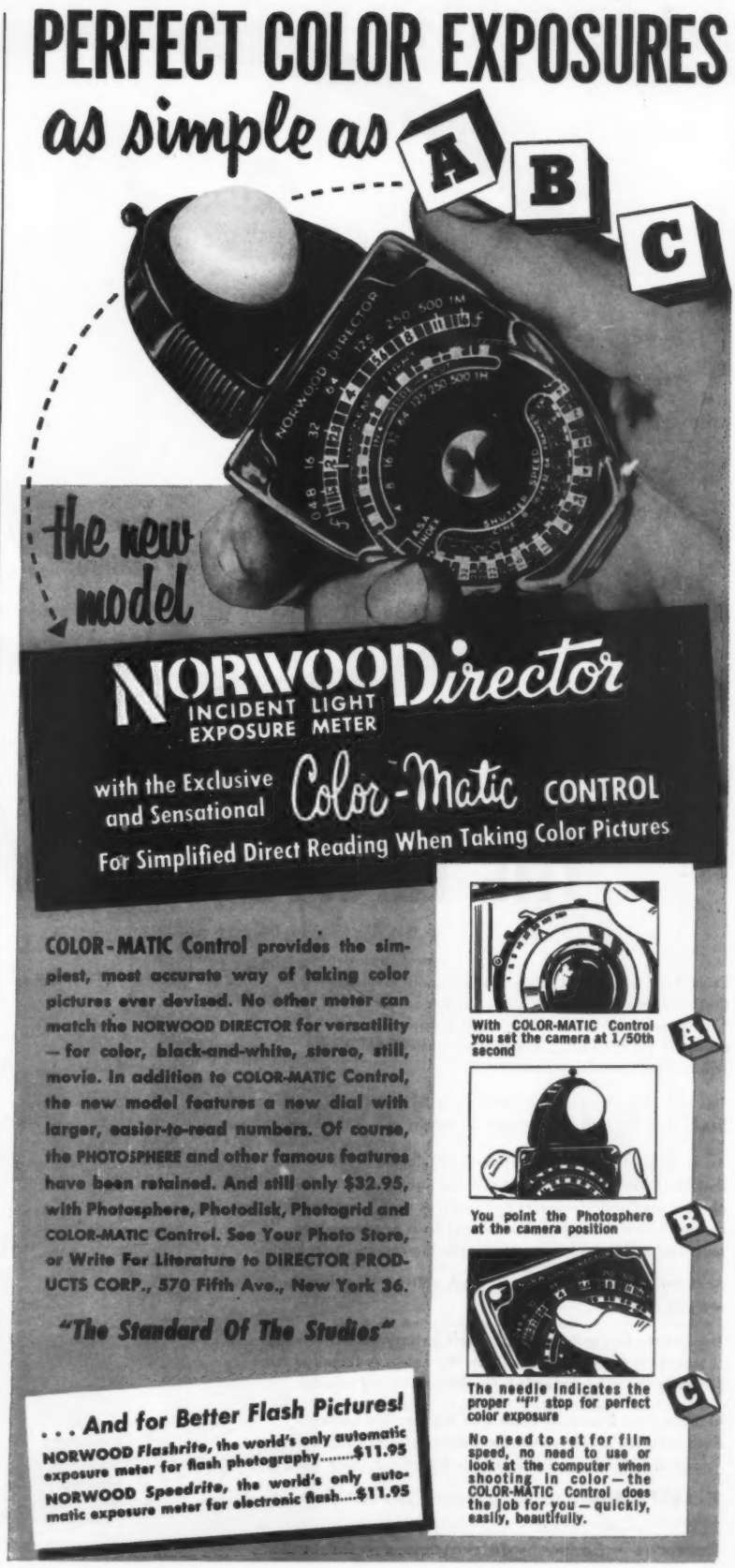
Two stereo safes—for the Stereo Realist and Revere 33—contain three sets of matched Photoar filters and a pair of twin lens shades. The safes, which match each of the cameras, hold the three pairs of filters in one compartment, the duraluminum shades in another compartment. The lens shades for the Stereo Realist are engineered to clutch the diaphragm of the lens to permit its being set by twisting the lens shade. The filters are for Koda-

chrome or Ektachrome, Ansco Color, and black-and-white films. Complete with lens gauze and filter instruction. Price, for the Stereo Realist safe (*illustrated*), $19.95; for the Revere, $17.95. The stereo safe case alone, for either camera, is priced at $5.95. The Photoar filters in a plastic case are available for the Realist at $5.35 per pair; for the Revere, at $3.25 per pair. Lens shades, available separately, are $2.50 per pair for the Realist, and $2.80 per pair for the Revere. A free catalog describing Tiffen accessories is available by writing:
TIFFEN MARKETING CO.
617 SACKET ST.
BROOKLYN 17, N. Y.

Lens Shade-Filter Holder

Designed for the Ricohflex and other cameras with 36mm diameter lens mounts, the Ricohflex combination lens shade-filter holder accepts Series VI filters. It is simply slipped over the

(*Continued on page 38*)



HANDFUL OF POWER— THE LEICA FLASH UNIT

Leica flash synchronization is the only built-in system that performs perfectly at every shutter speed from 1/25 to 1/1000 second. While the flash unit is basically designed for the Leica, its exclusive features will work equally well on other cameras.

This unit is so compact you can hold it lightly in your hand, or slip it into your pocket. It weighs only 9½ ounces.

An exclusive feature is the matte finish aluminum reflector that folds like a ladies' fan. It diffuses light evenly over the entire picture area and eliminates hot spots. A simple adjustment centers bulbs of all sizes. The midget bulb adapter—with push-button ejector—slips easily into the regular bulb holder.

Accessories adapting the Leica flash unit for "multiple-flash" work are also available.

The Battery Capacity has a 22½-volt battery capacitor unit. It mounts in the accessory clip on the Leica. A threaded tripod socket in the case makes independent mounting possible.

Get the most from your Leica with the sure-fire Leica flash unit. Try it this winter for indoor color or black-and-white. Priced at $24, it's available at your franchised Leica dealer's.

E. LEITZ, INC., *468 Fourth Avenue, New York 16, N. Y.*
Distributor of World-famous Products of Ernst Leitz, Wetzlar, Germany

Cameras • Lenses • Microscopes • Binoculars

Leica
world's most famous camera

BUY WITH CONFIDENCE • BUY FROM ALFRED BASS, Inc.

VIEW-MASTER

PERSONAL STEREO CAMERA AND PROJECTOR

- Easy to use. Just aim and shoot.
- Easy on film. Kodachrome at less than 10c per pair!
- Easy on the eyes.
- Easy to buy, at only.. **$149.50**

THE STEREO-MATIC, finest in stereo projection!

- Simple—one knob makes all adjustments.
- Brilliant illumination, brilliant performance.
- Beautifully styled. Priced right, at..... **$179.50**

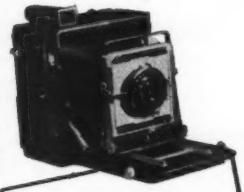
Stereo Viewer only..... **$2.00**

TOP TRADE-IN ON YOUR OLD CAMERA! WRITE FOR DETAILS.

SPEED GRAPHIC

Al Bass Offers Highest Trade-Ins On Complete Graphic Outfits.

FACTORY NEW—LATEST MODELS—GUARANTEED



Outfit Includes: Graflock Back with Ektalite Field screen, choice of lens, synchro shutter, complete flash gun, Kalart coupled rangefinder, film pack adapter, 6 sheet film holders, filter adapter ring, set of filters, lens shade, carrying case.

Speed—with 2¼ x 3¼ f/4.5 Ektar.....	$326.00
Crown.....	286.00
Speed—with 4 x 5 f/4.7 Ektar.....	326.00
Crown.....	281.00
Speed—with 4 x 5 f/4.7 Optar.....	336.00
Crown.....	291.00

BOXES ONLY . . .
Factory Guarantee. Your Lens Installed At No Extra Charge.

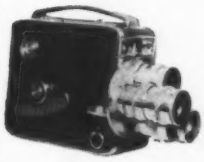
	2¼x3¼	4 x 5
Speed	173.45	180.45
Crown	133.80	136.40
Century	85.00	

PRECISION-BUILT KEYSTONE

Capri

—the quietest camera ever made; largest optical viewfinder of any home movie camera! f/2.8 fixed focus lens, 8mm rollfilm

ONLY $59.50



Olympic

—fingertip control, exclusive magnafinder spreads picture range. Choice of f/2.5 coated lens, f/1.9 lens in focusing mount . . . 8mm rollfilm, with f/2.5

ONLY $79.95

Pathfinder

—8mm rollfilm; more precision features than any camera in its price field. Interchangeable lens mount takes wide-angle, telephoto lenses for broad range of Hollywood movie effects.

ONLY $49.95

Brightbeam

500 Watt 8mm Projector. Fine color-corrected f/1.6 lens; cleaner, brighter, better movies. Complete with case..... $79.90

Regal

Only 8mm projector with built-in splicer! Lite-o-matic connects room light with projector lamp. New film gate for easier threading. 750 watt. With case, f/1.6 ctd. lens. $159.50

GENUINE ZEISS PRECISION CAMERAS AT NEW LOW PRICES WITH FACTORY GUARANTEE

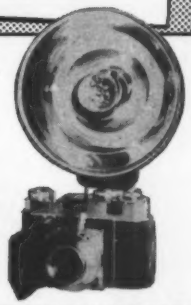
		WAS	NOW
CONTESSA	—the compact and efficient 35mm camera	$204.00	$153.00
IKOFLEX IIA	—top performer in 2¼ sq. reflex camera	$200	$169.00

Similar price reductions on other models. Send for literature and describe your present camera for top trade-in allowance.

ALFRED WE PAY TOP CASH FOR YOUR CAMERA NO DELAY...CHECK MAILED SAME DAY

NEW! German B. C. Flash Gun

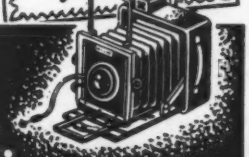
ONLY $3.95



Fits any camera with built in Sync. Compact! Puts out 22½ volts. Condenser recharges to give full 22½ volts again on next shot. Assured full output. Battery 95¢ extra!

Every item, new or used, is backed by our ironclad guarantee
Alfred Bass PRESIDENT

BASS INC.



585 MARKET ST • SAN FRANCISCO
YUkon 6-0583

Alfred Bass, Inc., 585 Market Street, San Francisco, Calif.

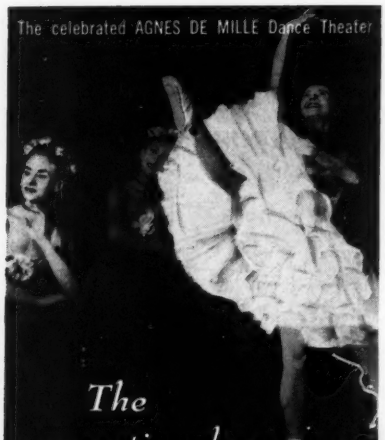
Gentlemen: Please send me_____B.C. Flash Guns at $3.95 each. State make of camera and shutter.

_____

Name_____

Address_____

City_____Zone_____State_____



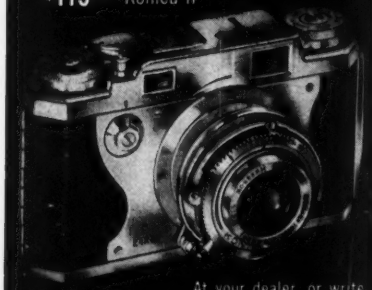
The exceptional camera functions like a great dance group

Superb individual units performing together to produce superlative results . . . that is Konica!

From the moment you handle a Konica II . . . you realize why so many thousands of owners sing its praises. The brilliant 5-element Hexanon 1:2.8 lens . . . its nine speed (1 sec. to 1/500th) synchronized Konirapid-S Shutter . . . its compactness and speedy settings — all combine with the super quality rangefinder which knows no equal in any camera price class to bring you truly unparalleled pictures.

Test the famous Konica rangefinder at your dealer . . . its larger image and brighter view of even the dimmest subject will amaze you. See it today!

$119.75 Konica II



At your dealer, or write for descriptive booklet:

Konica

KONICA CAMERA CO., 76 W. Chelten Ave., Phila., Pa.
In CANADA: McQueen Sales Co.
In VENEZUELA: C. A. Yazawa & Cia.

Prices in Canada: Konica I, about $125; Konica II, $149

NEW PRODUCTS

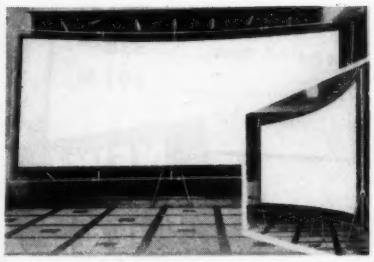
(Continued from page 35)

lens mount. Then, while the knurled part of the lens shade is held in position, the top band is slightly turned in the direction of the arrow. Filters are held in place inside by a click band. Securely positioned, the unit cannot

be pulled off unless it's turned to the "open" position. Price, $3.50. For additional information, write:
PHOTOGRAPHIC IMPORTING & DISTRIBUTING CORP.
67 FOREST RD.
VALLEY STREAM, N. Y.

Radiant Curvex Wide Screen

A new portable wide screen, the Curvex, for 16mm projection, is scheduled to be available in sizes from 5-20 ft. wide. It is designed to be used in conjunction with an anamorphic lens system. This squeezes the image in the taking process, and enlarges it in projection in order to approximate the width of normal vision on the screen. Such a lens necessitates a wide, curved screen to accommodate the broad image.



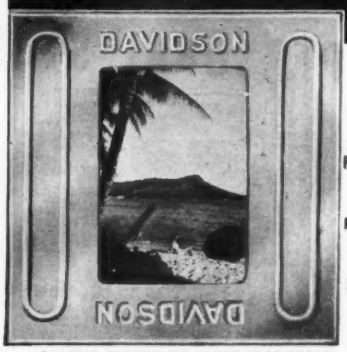
The Curvex is made of a reflective silver fabric which is strung on a lightweight aluminum frame (*see cut*). This gives the screen its taut curve as well as good distribution of light.

Although prices have not yet been released at the present time, more information is available by writing:
RADIANT MFG. CORP.
2627 W. ROOSEVELT RD.
CHICAGO 8, ILL.

The price of the **Kodaslide Table Viewer, 4X,** as well as **its carrying case,** has been reduced. The $49.50 viewer now costs $37.50. The carrying case, formerly $15.50, is now priced at $9.75. For further information write: *Eastman Kodak Co., Rochester 4, N. Y.*

BEST FOR 35mm SLIDES

The All-New Davidson Metal Slide Binders



2x2 Slides For 35mm Pictures ★ Patented ★ Actual Size

SLIDES MADE IN HALF THE TIME

3 Quick Steps
1. Pull binder apart.
2. Insert picture between the 2 pieces of micro glass.
3. Slide it together.

All the Features you've wanted

★ **EASY TO MOUNT**—insert film, slide together.
★ **DURABLE** — metal frame can't wear out.
★ **STANDARD** — fits all viewers and projectors.
★ **PERMANENT**—no adhesive to dry out.
★ **SAFE**—glass and metal bind film safe and flat.
★ **ECONOMICAL**—mounts can be used over and over again.
★ **VALUE**—quantity production permits lowest prices.
★ **TITLING** — ample space and strips provided.

PRICES: Box of 20 $1.55 Box of 50 $3.65

For sale at photographic counters everywhere

DAVIDSON MANUFACTURING CO.
2223 Ramona Blvd. • West Covina, California

it's my favorite, too!

only **$19.95** *(complete with case)*
with Karry Karton **$12.95**

No wonder Saint Nick loves his new Bar-lite . . . it's Crownlite's FOLDMASTER DELUXE. The FOLDMASTER DELUXE 4-lamp Bar-lite makes movie taking a pleasure. So easy to use . . . so easy to store! Comes equipped with a luggage type carrying case that stores camera, accessories, and FOLDMASTER with bulbs *attached.* Ask your dealer to show you the many new *wonderful* features of the FOLDMASTER DELUXE. You'll love it, too!

Underwriters' Laboratories Approved. Guaranteed for Life

CROWNLITE, INC.
2027 Pitkin Ave., Brooklyn, N. Y.

ABE COHEN'S EXCHANGE
SLASHES PRICES on LAST MINUTE GIFT ITEMS

ORDERS FILLED WITHIN 24 HOURS OF RECEIPT. HUNDREDS OF ITEMS IN STOCK. CALL OR WIRE IF THE ITEM YOU WANT ISN'T LISTED. ALL SOLD WITH 15 DAY MONEY BACK GUARANTEE.

NEW — MODEL S
35mm EDINEX CAMERA

Reg. $39.95
SALE $29.95

Has coated F2.8 lens, precision Pronto Synchro shutter with speeds up to 1/200th, built-in flash, direct optical viewfinder. Satin chrome and leather finish.

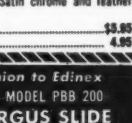
EVEREADY LEATHER CASE $3.95
FLASH GUN 4.95

Perfect Companion to Edinex
NEW MODEL PBB 200
ARGUS SLIDE PROJECTOR

Formerly $49.95 only $34.95

With 200 watt blower and "Right-side-up" rotary slide carrier. Complete with attractive carrying case.

SAVE $3.50 ON NEW
2 x 2 VU-AID COLOR MASTER SLIDE PROJECTOR



Formerly $10.95 SALE $7.45

Sturdy all-steel construction, 100 watt illumination, new condensing system, 4" F3.5 lens in focusing mount. Approved by Underwriters Laboratory.

SAVE ON LEICA CAMERAS
Used—but equal to new in appearance and performance—fully guaranteed

LEICA IIIC

With coated Summitar F2 lens, coupled range finder.

Formerly $352.00 SALE $169.50

SIMS FLASH GUN $11.95
EVEREADY LEATHER CASE 8.50

LEICA IIIF

Latest model with red synchro dial, coated 50mm Summitar F2, coupled range finder.

List $370.00 SALE $239.50

SIMS FLASH GUN $10.95
EVEREADY LEATHER CASE 8.50

Save $116.80 on latest model
KINE EXAKTA VX

With Zeiss Biotar F2 coated lens. Pre-set Diaphragm — *If new $353.30*

Built-in flash, 29 speeds, built-in strobe and flash synchronization.
EVEREADY LEATHER CASE ... 8.50

ONLY $236.50 (like new)

SPECIAL OFFER!
35mm BALDINETTE II CAMERA OUTFIT

Camera $49.95
DeLuxe Leather Case 7.95
Metal Standard Flash Gun 8.95
Total List $67.85

All 3 for only $49.95

Coated Schneider Radionar F3.5 lens, Prontor SV full synchro shutter, built-in self timer, double exposure prevention, automatic film stop and counter. 9 speeds from 1 second to 1/300th.
Attractively gift packed for Christmas giving.

SPECIAL!!! BRAND NEW 35mm
KODAK AUTO RETINA IA

less range finder

- Coated Schneider Xenar F2.8 lens
- Rapid film advance lever
- Speeds from 1 sec. to 1/500th

Includes: Eveready leather case

MX Full synchro compur rapid shutter

only $79.50

Imported PRAEZISA RANGEFINDER ONLY $3.95

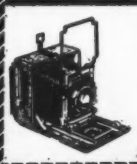
quality rangefinder that gives you accurate focusing from 2 feet to infinity. Reg. Meters or feet. Plus leather case. $5.00

Perfect Christmas Gift for the youngster! Order now while they last.
Imported German Allmikro
3 OBJECTIVE MICROSCOPE

60X-120X-180X
Reg. $24.95 SALE
A NEW LOW PRICE $9.95

Youngsters and students alike will spend eager hours looking thru this precision microscope. Sensitive focusing adjustments, sturdy base, plano substage mirrol and spring slide holder plus 5 blank slides. Packed in handsome wooden box. Instruction manual included.

SAVE $85.05 ON BRAND NEW PRESS OUTFIT
2¼ x 3¼ Model C BUSCH PRESSMAN



With 105mm Voigtlander Color Skopar F3.5 coated lens in Compur rapid "MX" Full Synchro Shutter.

INCLUDES:
- Meyer Cam coupled range finder

While They Last
List $205 $119.95

Sale! BRAND NEW Imported
BOWER X

2¼x3¼ Roll Film Camera Takes 8—2¼ x 3¼ pictures or 16—1⅝ x 2¼ pictures on 620 film.
With coated Schneider F4.5 lens, Vario synchro shutter, speeds from 1/25th to 1/200th

Reg. $34.50
SALE $25.75

LEATHER EVEREADY CASE $5.29
FLASH GUN 4.80

It's easy to do your own developing and enlarging!
Nationally Advertised
ENLARGER
(For negatives up to 2¼ x 3¼)

List $29.95 only $21.95

FEATURES:
- 3¼" F7.7 anastigmat lens
- Aluminum lamp unit keeps negatives cool
- Rotating dustless negative carrier
- Non-warp pressed steel baseboard
- 8 ft. cord with handy switch

Big Savings on Latest Model
ZEISS CAMERAS
All used — all equal to new

Prices include Leather Eveready Case

	Formerly	SALE
Super Ikonta B, coated Tessar F2.8, "X" Synchro	$248.00	$149.50
Super Ikonta BX, coated Tessar F3.5 "MX" Synchro	293.00	179.50
Super Ikonta C, coated Tessar F3.5, "MX" Synchro	196.00	124.50
Contessa 35, coated Tessar F2.8, "MX" Synchro	216.00	119.50
Contax IIA, coated Sonnar F2, case	415.00	239.50
Contax IIA, coated Sonnar Opton F1.5	448.00	274.50
Contax IIIA, coated Sonnar Opton F1.5	498.00	309.50

Davidson STAR-D Model D-18 TRIPOD

Double extension tripod with Multi-Cam Head

Reg. $15.40
SALE $11.95

Precision die-cast aluminum. Lifetime factory guarantee. Multi-cam platform gives you long enough base to fit all 2¼x2¼ reflex cameras. Detach platform and head fits any 8 or 16mm movie camera.

SAVE MORE THAN 50% ON HIGH GRADE
BINOCULARS & THEATRE GLASSES
All include case
all plus 20% Fed. Tax

	Reg.	SALE
3.5x OPERA FOLDING GLASS	$ 15.00	$ 8.95
OPERA GLASSES, Choice of blue, red, pearl	27.50	17.95
3.5x15 ZEISS THEATIS, ctd., L.N.	100.00	49.00
6x25 CATANIA, German, wide field, compact, coated	60.00	39.50
7x35 MEGAPHOS, coated	65.00	37.50
7x50 ASTRA, coated	60.00	32.50
8x30 STEREOLUX, coated	50.00	28.50
8x30 SCHMITZ, German, coated	55.00	37.50
10x56 SCHUTZ, coated L.N.	150.00	49.50
16x50 MEGAPHOS, coated	90.00	54.50

Many others including Zeiss, at drastic reductions. Write for details.

SALE! NEW AND USED LENSES

FOR LEICA		SALE
35mm Summaron F3.5 coated	Like New	$67.50
35mm Canon F3.2 ctd.; case finder	Like New	79.50
40mm Olympus F2.8 coated, case	Like New	52.00
50mm Elmar F3.5		29.50
50mm Elmar F3.5 coated	Like New	47.50
50mm Summar F2 coated		42.50
50mm Summitar F2 coated	Like New	79.50
50mm Summicron F2 coated	Like New	125.00
50mm Summarit F1.5 coated	Like New	132.50
50mm Voigt. Nokton F1.5 ctd., filter & shade		100.00
73mm Hektor F1.9 coated		72.50
85mm Summarex F1.5 coated	Like New	234.50
85mm Zeiss Sonnar F2 coated	Like New	97.50
90mm Elmar F4 coated	Like New	84.50
135mm Tele Colinar F3.8 coated	Like New	48.50
135mm Hektor F4.5 coated	Like New	99.50

FOR CONTAX I, II, III, IIA and IIIA		
35mm Orthometer F4.5 Wide Angle		84.50
*35mm Zeiss Biogon F2.8 coated	Like New	97.50
35mm Zeiss Opton F2.8 coated	Like New	134.50
35mm Zeiss Biometar F2.8 coated	Like New	95.00
50mm Tessar F2.8		29.50
50mm Sonnar F2		32.50
50mm Opton F1.5 coated	Like New	110.00
75mm Zeiss Biotar F1.5 coated	Like New	139.50
85mm Zeiss Opton F4 coated	Like New	95.00
85mm Zeiss Sonnar F2 coated	Like New	129.50
135mm Zeiss Opton F4 coated	Like New	109.50
180mm Sonnar F2.8 ctd. Preset, Flektoscop		375.00

*Will not fit Contax IIA or IIIA.

FOR KINE EXAKTA—EXA		
28mm Retrofocus F3.5 coated W.A.	Like New	95.00
35mm Retrofocus F2.5 coated W.A.	Like New	79.50
40mm Tessar F4.5 coated W.A.	Like New	59.50
40mm Olympus F3.5 coated W.A.	Like New	39.50
50mm Tessar F3.5 coated Pres	Like New	42.50
58mm Biotar F2 coated Preset	Like New	72.50
75mm Biotar F1.5 coated	Like New	129.50
90mm Sun F4 coated Preset	Like New	47.50
90mm Angenieux F1.8 coated	Like New	114.50
105mm Xenar F3.5 coated	New	64.50
135mm Tele Colinar F3.5 ctd. Preset	Like New	59.50
135mm Zeiss Triotar F4 coated	New	39.50
135mm Angenieux F2.5 coated	New	135.00
150mm Tele Xenar F5.5 coated	Like New	42.50
180mm Tele Picon F5.5 coated Preset	New	67.50
250mm Meyer F5.5 coated	New	109.50
400mm Meyer F5.5 coated	New	165.00

FOR CONTAX S—D—PENTACON PRAKTICA FX, PRAKTIFLEX FX		
35mm Retrofocus F2.5 coated W.A.	Like New	79.50
40mm Tessar F4.5 coated W.A.	Like New	59.50
40mm Steinheil F3.5 coated Wide Angle	New	42.50
50mm Prakticar F2.9 coated		19.50
50mm Tessar F3.5 coated	Like New	29.50
58mm Biotar F2 coated Preset	Like New	79.50
75mm Biotar F1.5 coated	Like New	129.50
90mm Sun F4 coated Preset	Like New	47.50
105mm Steinheil F3.8 coated	New	32.50
135mm Xenar F3.5 coated	New	64.50
135mm Albinar F4.5 coated	New	34.50
135mm Sun F3.8 coated Preset	Like New	54.50
240mm Tele Xenar F5.5 coated	New	94.50
300mm Tele Xenar F5.5 coated	New	100.00
400mm Meyer F5.5 coated	New	185.00

SAVE $35.00 ON BRAND NEW
Latest model 2¼x3¼ Roll Film
VOIGTLANDER BESSA I

- Coated Skopar F3.5 lens
- Compur rapid MX Full Synchro shutter
- Speeds 1 sec. to 1/500th
- Choice of 2 picture sizes on 120 film

Reg. $94.50 only $59.50

SAVE UP TO 25%
8 and 16mm Demonstration models
MOVIE CAMERAS AND PROJECTORS

SAVE $90.50!
16mm REVERE MAGAZINE OUTFIT

3 Lens Turret—Model 26A Camera

With built-in Micrematic telescopic view finder.

INCLUDES:
1" coated F1.9 lens, focusing mount
3" coated F2.5 telephoto lens, focusing mount
17mm coated F2.7 Wide Angle lens, focusing mount
Leather compartment case

Complete Outfit Reg. $310.00 SALE $219.50

SAVE $40.00! 16mm KEYSTONE
A82 PROJECTOR

Reg. $129.50 SALE $89.50

750 watt lamp, rewind, reverse, still, 400 ft. reel.

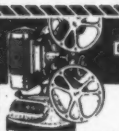
SAVE $62.50! 8mm KEYSTONE
ROLL FILM CAMERA OUTFIT

3 Lens Turret—Model K35 Camera
Triple turret accepts all standard telephoto or wide angle lenses.

INCLUDES:
½" coated F1.9 lens, focusing mount
1½" F3.5 coated lens, focusing mount
Leather compartment case

Complete Outfit Reg. $205.00
SALE $142.50

SAVE $44.50
DeJUR "750" PROJECTOR



Reg. $159.50
SALE $115.00

Carrying case, centralized controls, still and framer controls, 400' reels, precision F1.6 coated projection lens, 750 watt lamp. Plus many other wonderful features.

FOR THE MOVIE FAN
Get 64 Different Effects with
BOLSEY CINE-FADER
(for 8 and 16mm cameras)

Fade-ins, fade-outs, dissolves, masks are but a few of the professional results you can get with the Bolsey Cine-Fader. With attaching screw clamp for all lenses. Complete with instructions.

Reg. $22.50 New Low Price $14.95

SAVE ON 8 or 16mm
BAIA STANDARD EDITOR

Reg. $56.75
SALE $43.95

You may purchase the complete outfit or buy the viewer now and fill in the later. Please specify 8 or 16mm when ordering.

	Reg.	SALE
MOVIE ACTION VIEWER	$38.50	$30.75
800' STANDARD REWIND (8 or 16mm)	5.95	4.75
FILM SPLICER (8 or 16mm)	7.95	6.35

MOVIE REELS & CANS

	List	SALE
8mm Kodak 200' aluminum reels	$ .60	$ .39
8mm Abco 200' metal cans	.45	.25
8mm Abco 300' reel AND can	1.30	.96
16mm Abco 400' reel AND can	1.50	.88

Minimum order $2.00

ABE COHEN'S EXCHANGE, INC.
"THE HOUSE OF PHOTOGRAPHIC VALUES"
142 FULTON STREET • NEW YORK 38, N. Y.

All items sold F.O.B., N. Y. except where marked otherwise. Add approximate postage. We will refund overage.

*Sid Caesar and Imogene Coca, stars of NBC-TV's "Your Show of Shows" Sat., 9 P.M., E.S.T.

new TDC Stereotone

with BIG, ROUND 10" Concert Quality Speaker!

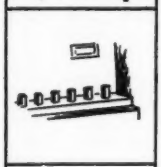
Sound reproduction achieved with TDC's Stereotone tape recorder is the richest, clearest, most true to life you have ever heard on portable tape recording equipment. Completely new engineering design and efficiency make this the only real high-fidelity tape recorder outside a professional studio. Treat your ears to the deeply satisfying "true-dimension" sound you can record on tape . . . and you'll want to own a TDC Stereotone. Because of advanced TDC engineering, you can enjoy Stereotone superiority at the popular price of $229.50.

HUNDREDS OF USES!

When you own a TDC Stereotone tape recorder you'll find wonderful new ways to use and enjoy it! Make thrilling recordings of concerts, voices, songs, TV and radio shows, speeches, educational programs. They all record best and sound best with the concert quality of TDC's new Stereotone recorder.

2-WAY CONSOLE SPEAKER

Mounted in back-panel to lift forward for big-audience "concert hall" sound projection; acoustically perfect for normal room use in closed position.

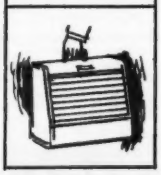


SELECTRIC CONTROLS

Fingertip operation without a chance of mistakes! 6 interlock-action electronic pushbuttons are self-restoring. Automatic tape tension, speed and brake.

ACCURATE INSTANT ACTION

Footage counter dial for easy selection from reel; Tone Beacon volume and tone indicator; instant remote on-off controls; single 2-speed control dial.



ALL-IN-ONE CONVENIENCE

Luggage-type case is portable with reels ready for instant use, has sturdy aluminum shock-proof frame. Slide-away cover is self-storing in case; accessory storage space.

Three Dimension Company
3512 N. Kostner Avenue, Chicago 41, Ill.

ASK YOUR PHOTO DEALER FOR A FREE DEMONSTRATION

HINTS ON 35MM CLOSEUPS

Editor's Note: This information is to be read in conjunction with the article on 35mm closeups beginning on page 76.

You're probably quite familiar with exposure, lighting and focusing at distances of 3 feet and over. In closeup work, however, these operations can become complicated. Here are a few hints to make the going easier.

Lighting for closeups can be quite similar to lighting at further distances. But when you attempt to move your lights in close, your camera and equipment may block the light or vice-versa. In this case move your lights further away and direct the light where you want it using a small hand mirror.

Once you have the lighting set up, your problem is exposure. When objects are too small for accurate exposure meter readings or the acceptance angle of the meter takes in too great an area, use the incident light method for making computations. If your reflected light exposure meter cannot be used for making incident readings, substitute a neutral gray card of 18 percent reflectance (the gray side of a Kodak Neutral Test Card) for the subject.

If your closeup attachment uses supplementary lenses, you will need no exposure increase over that shown by the meter. If the lens has been extended away from the film plane, additional exposure must be given. Although the formula for this exposure increase is available, the *Effective Aperture Kodaguide* will give you all the information you need in dial form.

When using any kind of ground glass focusing, accustom your eyes to looking *at* the ground glass surface, not *through* it. Make sure you can see the ground glass grain sharply before attempting to focus.

If you intend to do much closeup work on a ground glass, check with the manufacturer of your equipment to see if a ground glass incorporating a center clear spot and cross hairs can be fitted. In use, you train your eyes on the engraved cross hairs. You then focus the image without changing the focus of your eyes from the cross hairs. This takes practice, but it assures sharp focus since there is no ground glass grain to contend with.

One last suggestion: If you have a lens extension, try placing the lens backwards—that is with the front element facing the camera's film plane. This position provides the best extreme closeup definition since the optical conditions are more nearly like those for which the lens was designed.—*Norman Rothschild.*

the Camera Clubs

by MABEL SCACHERI

How is your camera club sparking its program activities? Bulletins, movies, and contests are some of the incentives for club interest.

Sitting right here in my swivel chair, I have been making a nationwide tour of camera clubs, plus side trips to India and Japan. I did all this traveling by reading a stack of monthly bulletins sent in by various clubs.

These have some tricky names for their publications: *The Birdie, Clique and Shudder, Light Reading, Photogram, Flash Flood, Gadget Bag, Leaky Bellows, Focal Point, Time Exposure, Cable Release,* and so on. Some of the bulletins, such as those from the Denver Council of Camera Clubs, the Baltimore Camera Club, Cleveland Photographic Society, Springfield (Mass.) Photographic Society, and Hawthorne (Ill.) Camera Club reproduce halftone or offset photographs—and do a good job.

They are a jump ahead of New York camera clubs which don't seem to run to illustrations. Also, many of the bulletins get ads from local stores and thus avoid the drain on club funds. Why don't all camera clubs try this? A camera club bulletin is a fine place for an ad, regardless of circulation.

In Bombay—pythons

Maybe there will be an idea for *your* club in the contents of these bulletins and the activities of our fellow fans. And then again, maybe you won't see much in one program of the Photographic Society of India, which meets in Bombay. As a model for the evening they had—a python!

"The slithery, sluggish creature coiled around the cylinder we had placed it on and slowly moved its head round, putting its tongue out," reports the club bulletin. Moving less slowly, one of the lady members departed, yipping loudly as she made an exit.

On a quieter evening this club viewed movies from the United States Information Service, including a film on Vermont, *Green Mountain Land,* which the members thought resembled neighboring Kashmir.

The club members are reading *Achhi Tasveeren Kaise Banayen,* the Hindu translation of Kodak's new *How to Make Good Pictures.* It was a tough translation job when they came to those technical terms. "Pratibimbak Satah" for "reflecting surface" puzzled

(*Continued on page 42*)

TDC for the SEASON'S BEST SLIDE SHOW OF SHOWS!

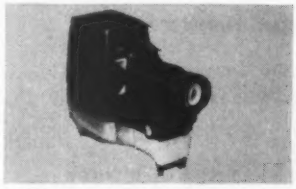
The greatest gift of fun for family and friends is the gift that gives for years to come. That's the TDC system of color slide projection. Easy, speedy, cooler, brighter TDC projection gives you all the pleasure with lots less work. And the famous TDC System keeps slides neatly filed, completely protected – yet instantly ready for showing! You'll find TDC is the projector you want—in any price range, from **$37.50.***

†stars of NBC-TV's "Your Show of Shows" Sat., 9 P.M., E.S.T.

TDC SELECTRON CHANGERS let you sit back and relax during slide shows, because all it takes is the flick of a finger to select, project and return each slide to the SELECTRAY.
Semimatic changer . . . $12.50
Automatic changer . . . 25.00

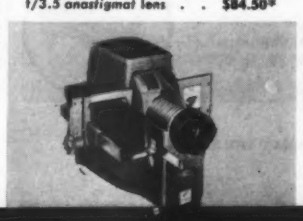
TDC SELECTRAYS keep slides safe, clean, ready to show the minute you slip each SELECTRAY into the TDC SELECTRON changer. No lost slides, fumbling, spilling or show-time interruptions! 2 types—$1 & $1.50 ea.

TDC SLIDE PROJECTORS are the only ones which offer a TDC SELECTRON changer as original, factory-matched equipment with most models! TDC assures you extra fun without extra cost! You'll enjoy your slides more the TDC way!



TDC HEADLINER—Blower-cooled, 200-watt illumination; 5" coated *anastigmat* lens; ruby-red and grey. Economy-priced $37.50*

TDC STREAMLINER "500"—With SELECTRON-Semimatic Changer! 500-watt illumination; Gear-Focusing, Venturi-type blower cooling. Coated 5" f/3.5 *anastigmat* lens . . $84.50*



YOUR SLIDE SHOW OF SHOWS IS BETTER THAN EVER WITH TDC!

Smoother, easier, more enjoyable showing is yours with the TDC DeLuxe Model D (shown in top photo) whose Selectron-Semimatic Changer is included for extra fun. Blower-cooled 300-watt illumination, 5" f/3.5 coated *anastigmat* lens, roller-bearing focus, smart styling $69.50*

*Fed. Tax Incl. All prices subject to change without notice.

Famous Booklet . . . FREE with coupon!

Shows how to make better slides—give better slide shows. Written by Rus Arnold, A.P.S.A.

THREE DIMENSION COMPANY, Dept. MP1
3512 N. Kostner, Chicago 41, Ill.
Please rush my Free copy of your new slide photography and projection booklet.

Name .....
Address .....
City ..... Zone ..... State .....

Pathé

THE ONLY 16mm EYE-LEVEL REFLEX MOVIE CAMERA AVAILABLE TODAY

What the motion picture world has adopted as an absolute must; what still manufacturers have recognized as an important advantage; is now available in a motion picture camera designed expressly for 16mm professionals and serious amateurs.

You see the subject exactly as it is being photographed. You see it through the very lens in use. Parallax is entirely eliminated. You compose more easily; you frame accurately; and you focus sharply, even during the actual shooting of the scene. This cannot be done with any other existing 16mm movie camera on the market today.

EYE-LEVEL REFLEX FOCUS

A feature formerly restricted only to the professional cinematographers now available in the Pathé "16". You sight directly through the lens in use *while it is in use!* You can follow focus—you see when the subject moves out of the depth of field — you can achieve perfect composition — from titles to landscapes you know the exact limits of your field. Now no more out-of-focus pictures... no more chopped heads . . . no necessity for parallax correction—*there is no parallax.* All the advantages heretofore enjoyed by Hollywood's top cameramen are now made available to you by Pathé engineering.

In addition to the exclusive eye-level reflex focus system, the Pathé 16 offers you these professional features:

- Tri-lens Revolving Turret
- Variable Shutter for Wipes, Fades and Lap Dissolves
- Powerful Spring Wind Motor Runs 25 Feet of Film on One Winding
- Built-in Hand Crank for Manual Forward and Reverse Action
- Single Frame Device
- Accurate Frame Counter . . . Adds and Subtracts
- Automatic Footage Counter
- Vari-View Optical Viewfinder
- Weighs Less than 5 Pounds . . . Lightest in Its Class
- Accepts Single Perforated Sound Film
- No parallax — no guesswork — no more out-of-focus pictures — no more unexpected cropping.

Priced at $450.00 less lens. No excise tax. See Pathé's Model E at your favorite camera store, or write for free folder. Dept. M-1, DIRECTOR PRODUCTS CORP. 570 Fifth Ave., New York 36, N. Y.

THE CAMERA CLUBS

(Continued from page 41)

the Indians. I wonder how the translator did with "barn door lamps?"

To get back to the United States, The Venango Camera Club, of Oil City, Pa., cooked up a program which you may or may not consider a fine idea for your own club. They had a "Battle of the Sexes" evening, with 20 women color slide makers lined up against 20 men color sliders. Gold and silver medals were awarded, and the occasion was part of the club's annual dinner party celebration.

Social Events

Then there's the Merced Camera Club, of Merced, Calif., which had a pot luck dinner. Married members brought hot dishes; bachelors were allowed to grab a pie or cake at a bakery. It sounds like just the sort of thing more clubs should include to vary the more serious sessions. The Women's Photographic Society, of Cleveland, attended a play en masse —another good idea for the social side of camera clubbing.

I noticed that many clubs throughout the country have a greater variety of interests, or higher level of tolerance than the New York clubs. I mean, a regular black-and-white camera club will have evenings devoted not only to color slides but to stereo and movies. Around these parts the movie fans flock by themselves in their own clubs; the stereo fans in their club, etc.

In general, club meetings and club headaches follow a familiar pattern. They try to get the members to use ash trays, and to spot their color slides in the upper right hand corner as the slide is placed upside down in the projector. Not much luck on either score.

"Straight" photography versus tinkering can always cause a riot. It even produced a bitter word, "mediocrebrom," in the bulletin of the Stamford (Conn.) Camera Club bulletin.

Pictorial versus modern

And the pictorial versus modern wrangle sweeps round the world. In the Johannesburg Photographic and Cine Society bulletin comes this blast from South Africa: "Look at the walls of any salon or the print screens of a photographic society and what does one see? The same dreary procession of bewhiskered old men, drifting swans, static factual landscapes and chocolate-box girlies peeping demurely from behind shawls, mantillas or scarves." I lifted this quote second hand from the bulletin of the Cleveland Photographic Society.

I suppose what the Johannesburgers think is commonplace we'd consider excellent material if we visited South Africa. Grass is greener on the other side of the fence. But I imagine the members of the Circle of Confusion Camera Club in Tokyo, made up mostly of Americans stationed there, are in clover. For they are surrounded by

material new to them. Their bulletin, *The Nippon Image,* lists Japanese festivals of the month. In early February there is "Risshun," the bean-throwing ceremony during which heads of families throw boiled beans at house entrances and dark corners to drive out devils. And in late August, one town has a parade of torch bearers with torches ten feet long raining sparks all around to appease the wrath of a mountain deity.

This same club makes monthly trips to army hospitals to put on programs of projected color slides. That has been done before, but not half often enough in these United States.

A judge or an analyst?

I notice, in the programs of the Jackson Park Camera Club, of Chicago, that they list their speaker on print night as their "analyst" rather than as judge. Can it be that this club is so enlightened it has ceased to force judges to pick the "four best," or to list pictures first, second, third, etc.? It does seem to me to be a lot better for a visiting pundit to discuss and analyze the pros and cons of each print rather than to attempt to rate them competitively. But how the clubs, and all camera fans, do love contests, awards, medals, and trophy cups!

Club hoppers

The competitive, prize-grabbing spirit can lead to some quaint behaviour. Ever hear of "club-hopping?" I know of a few characters who join a club, make some prints that win prizes, then quit that club, join another, enter the very same prints in the contests of the new club, win prizes, quit, and move on. Of course, these people outsmart no one but themselves. And yet, their maneuvers must rankle in the bosoms of those who lost out in a contest where the old stand-by prints of the club-hopper won again. Maybe there is some way to stop this nonsense. Rules? They are always so hard to draw up. I guess the icy eye and frigid brush-off is the best way to avoid club-hoppers.—THE END

Camera Club Presidents: Please send us the name and address of your club so it can be listed in the Camera Club section of the Directory of the Photographic Industry. If you are listed you will receive material sent out periodically by certain photographic firms. Write: The Camera Clubs Editor, MODERN PHOTOGRAPHY, *251 Fourth Ave., New York 10, New York.*

RECTAFLEX

JEWEL OF ALL 35mm REFLEX CAMERAS

PRECISE . . . VERSATILE . . . RUGGED

For the Amateur — a camera of amazing simplicity and foolproof design.

For the Professional — an unsurpassed instrument of the highest quality capable of handling **all** photographic problems.

For the Perfectionist — a flawless jewel in conception, finish and features.

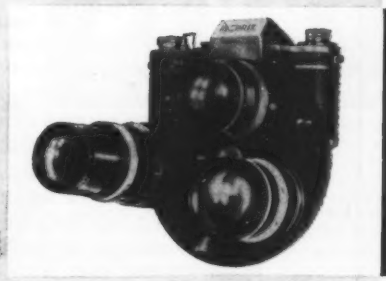
The RECTAFLEX is one camera that can be all things to all photographers. A recognized leader on two continents, this camera is so perfectly made it defies the written description.

Of all the 35mm reflex cameras, the RECTAFLEX gives the largest image and it offers, in addition to groundglass focusing, the hairline accuracy of its patented optical rangefinder. Add to this the automatic pre-set diaphragm control, shutter speeds to 1/1300th of a second, full synchronization for all flashbulbs at all speeds, and a host of other exclusive features and you'll see why you owe it to yourself to inspect Rectaflex before you buy. The Rectaflex with the Schneider Xenon f2 lens, carrying case and automatic pre-set diaphragm control is priced at $350.

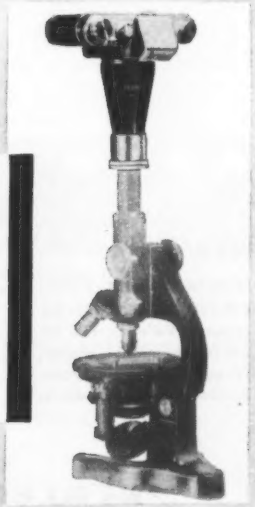
If your local dealer cannot show you the RECTAFLEX, we will furnish the name of a dealer who will be pleased to send one to you on a money back guarantee.

. . . The Rectaflex is adaptable to any microscope with the **"AMIC" ADAPTER.**

. . . The **Rectaflex Rotor.** The only 35mm reflex equipped with a three lens turret. Includes gun stock and pistol grip.



RECTAFLEX ROTOR



AMIC ADAPTER

Write for complete literature to Director Products Corp. 570 Fifth Avenue, New York, N. Y., Exclusive American Representatives.

NEW...

Multi-coated Rollei Filters and lens accessories. An exclusive Rollei process increases transmission, efficiency and enhances contrast. Available at your dealer's.

Note the camera invariably used by photographers who have *arrived* ... the one that produces *far more* of the great photos in news and photo magazines, in leading photo annuals, in books on travel and exploration. *Everywhere* you see proof of *how much* automatic ROLLEIFLEX contributes to fine picture results. Then examine Rolleiflex at your dealer's. Note its many exclusive features, including automatic operation, that contribute *so much* to its versatility, and fast, convenient shooting. You'll agree that only Rolleiflex will answer all your photographic needs ... head you *straight* for the TOP in photography.

BURLEIGH BROOKS, INC. 10 West 46th Street, New York 36, N. Y.
West, Alaska & Hawaii: **PONDER & BEST, INC.** 814 North Cole Avenue, Hollywood 38, California

Only PENN'S EASY PURCHASE PLAN Costs You NOTHING EXTRA

NO INTEREST CHARGES · CARRYING CHARGES · HANDLING CHARGES · SHIPPING CHARGES · RED TAPE

You HAVE It and USE It While You Take Time To Pay...

10 EQUAL MONTHLY PAYMENTS

THE NEW PRAKTIFLEX FX

The 35mm single-lens reflex camera that takes the guesswork out of photography by showing the exact picture you are going to get before you expose the film.

OUTSTANDING FEATURES: Easily interchangeable lenses. Pre-Set diapragm lens control. Waist-level reflex viewfinder and eye-level sports finder. Original factory synchronization. Focal plane shutter with 9 settings. Coupled film transport and shutter cocking. Convenient operating controls.

	Mfg. Price
PRAKTIFLEX FX f2.8 50mm Zeiss Tessar T-coated, pre-set diaphragm lens	$169.50
PRAKTIFLEX FX with f2 58mm Zeiss Biotar T-coated, pre-set diaphragm lens	220.00
PRAKTIFLEX FX with f2.9 50mm Prakticar coated lens	99.50
PRAKTIFLEX FX with f3.5 50mm Zeiss Tessar T-coated, pre-set diaphragm lens	139.50
PRAKTIFLEX FX with f1.9 58mm Meyer Primoplan V-coated lens	139.50
Prismfinder for Praktiflex FX	29.95
Eveready case for Praktiflex FX	10.95

NEW PENTACON

Newest 35mm Single Lens Reflex Camera

•

Made by Zeiss in Jena, Germany

•

The Zeiss Pentacon design is exquisite beyond reproach . . . the last word in luxury . . . for the connoisseur who wants the ultimate in rich, sparkling color and black and white pictures. The Pentacon is a 35mm single lens reflex eye-level prism focusing camera. You see a life-size image always upright and non-reversed. The new improved focal plane shutter has a range from 1 second to 1/1000 & self timer. Other features include factory built-in flash and strobe; Zeiss factory coated lenses with pre-set diaphragm controls, built-in depth of field scale always visible, double exposure preventer, interchangeable lenses and many more.

	Mfg. Price
PENTACON with f2 58 Zeiss Biotar "T" coated lens, with preset diaphragm	$359.50
PENTACON with f2.8 50mm Zeiss Tessar "T" coated lens, with preset diaphragm	299.75
PENTACON with F1.9 58mm Meyer Primoplan Lens with preset diaphragm	239.50
FLASHGUN for Pentacon-B.C. Capacitor	15.50
Genuine leather eveready case for Pentacon	15.00

All Equipment is Factory Brand New . . . and Fully Covered by PENN's Famous Guarantee Bond and Manufacturers' Warranties

Telefoto Lenses, Coated for . . . EXAKTA, PRAKTIFLEX, PENTACON, EXA

	Mfg. Price
f/2.8, 85-mm. Steinheil Culminar	$ 68.00
f/1.8, 90-mm. Angenieux Type P1	149.50
f/2.5, 90-mm. Angenieux Type Y1	84.50
f/2.5, 135-mm. Angenieux Type P2	169.50
f/3.5, 135-mm. Angenieux Type Y2	75.50
f/4.5, 135-mm. Steinheil Culminar	60.00
f/5.5, 150-mm. Hugo Meyer Goerlitz Tele-Megor	55.95
f/5.5, 180-mm. Hugo Meyer Goerlitz Tele-Megor	82.95
f/5.5, 250-mm. Hugo Meyer Tele-Megor	132.15
f/5.5, 400-mm. Hugo Meyer Goerlitz Tele-Megor	199.50

EXA

35mm Single Lens Reflex

The single lens reflex design of the Exa is the key to better 35mm photography. No guess work. The Exa will produce excellent results in color or black & white prints. Has interchangeable lenses, interchangeable viewfinders, built in flash & strobe.

	Mfg. Price
Exa with F2.9 lens	89.75
Exa with F2.9 Meyer Trioplan Lens	99.75
Exa with F3.5 Zeiss Tessar	119.75

8mm EUMIG 88

With F1.9 Lens

The leading camera in Europe for years—now available in the United States. Eumig is the finest camera in the world with built in exposure meter—You'll get perfect results every time. Multiple speeds for slow motion, poor light, normal light, animation, cartoons plus many more features.

	Mfg. Price
Eumig w/F1.9 Coated lens	$139.50
Eveready Case	10.00
Portrait Lens & Filter Set—9 pieces	12.00

Trade-Ins Accepted as Part Payment.

Write for FREE Catalog of Merchandise Available Under PENN's EASY PURCHASE PLAN.

NOTE: This plan is available to residents of the U. S. only.

World's Most Versatile 35mm Camera!

EXAKTA VX

For the amateur, professional, doctor, dentist, scientist . . . take pictures the modern way. You see what you get . . . you get what you see. Interchangeable eye-level and waist-level viewfinders, easy interchangeability of lenses, 29 shutter speeds from 1/1000 sec. to 12 sec., and many other exclusives.

TWO GREAT NEW MODELS . . .

EXAKTA VX—LATEST MODEL w/Penta-Prism & Rangefinder and:	LIST PRICE
50mm Xenon f/2.	$314.80
50mm Tessar f/2.8 Preset	338.80
50mm Primoplan f/1.9 Preset	346.50
58mm Biotar f/2. Preset.	400.00
75mm f/1.5 Preset	430.00
50mm Agenieux f/1.5 Preset	442.00

EXAKTA VX—LATEST MODEL w/Waist-Level Finder and:	LIST PRICE
50mm Tessar f/3.5	$249.50
50mm Tessar f/3.5 Preset	269.50
50mm Xenon f/2	257.00
50mm Tessar f/2.8 Preset	279.00
50mm Primoplan f/1.9 Preset	289.50
50mm Xenon f/1.9 (Click-Stop)	324.50
50mm Biotar f/2. Preset.	353.30
50mm Angenieux f/1.5 Preset	385.00

Wide Angle Lenses, Coated for . . . EXAKTA, PRAKTIFLEX, PENTACON, EXA

	Mfg. Price
f/3.5, 28-mm. Angenieux Retrofocus Type R11	$120.00
f/2.5, 35-mm. Angenieux Retrofocus Type R1	99.50
f/4.5, 40-mm. Zeiss Tessar	99.00
f/4.5, 40-mm. Hugo Meyer Goerlitz Helioplan	74.50
f/3.5, 40-mm. Steinheil Cassaron	49.50
f/5.7, 38-mm. Berthiot	39.95

PENN CAMERA

LOngacre 4-2230 · 126 West 32nd Street · New York 1, N. Y.

"FAMOUS FOR FAIRNESS"

PENN CAMERA, Dept. 114, 126 West 32nd St., New York 1, N. Y.

Please ship the following _____

_____

I enclose $_____ as my first of ten equal monthly payments. I understand I will NOT pay ONE CENT over the Manufacturer's Price.

☐ I am shipping equipment for your top Trade-In allowance as part payment for above.

☐ Send FREE catalog of other Merchandise on PENN's Easy Purchase Plan.

☐ Send Specific information on _____

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

BY STANLEY H. BROWN

Portraits

The incisive approach of Dr. Herman Moses

PHOTOGRAPHERS STRIVE for various goals when they make a portrait. Some settle for a simple likeness. Others use lighting and dramatic effects to produce a mood. Still others use backgrounds, props, and symbols to identify the subject in time and space. Dr. Herman Moses, a New York City physician, has something else in mind when he gets behind his camera.

The term "incisive" has been applied to his work—not because the photographer is a doctor, but his portraits have the quality of penetration into the subject. They are, on close examination, brutal, merciless. Every hair, every pore shows. The despair, if any, the troubled spirit, the payment to life for living. The technique—the crosslight that catches roughened textures, lines, even the hairs on the upper lip—the huge 16x20 enlargements which shock with their bigger-than-life detail—is fitted to the creative urge of revelation.

Moses tries to capture "a certain abstract quality," as he terms it, that doesn't show on the subject's face immediately but which comes only after a close, highly personal relationship. When Moses works with a subject—he likes to call them "victims"—he doesn't just wait, tell some funny stories, make small talk, and then suddenly snap the shutter. His method is not a hunt spent waiting for the quarry to appear. Rather it is an hours-long process of shooting, disarming the victim, and more shooting, with the "big head" (Moses' term for his best portraits) coming generally at the end of the session. And if the sitting is successful, the final product may only vaguely resemble the subject as he himself and other people see him. But it will tell much about the victim's feelings.

For this kind of work, Moses has a big advantage over other photographers, professionals as well as amateurs. That's because he is a general medical practitioner with years of experience at finding out what people feel, what's bothering them, and where they really hurt. He is the old-fashioned family doctor, part physician, part psychologist. At times, he admits, his portraits reveal even too much. "I would never have done these the same way at all, if I were not a doctor. I couldn't have," he says. "But as a doctor, I can make a person reveal much more about himself than he otherwise would."

As a result, a session with Moses probably more closely resembles an hour with a psychoanalyst than a sitting with a photographer. And since many of his victims are also patients, he has an additional advantage. It would be difficult to decide where the physician in him ends and the creative photographer begins, because the two are so closely integrated.

Yet it would be wrong to imagine that his portraits are in any sense sterile or clinical. When Moses talks of the qualities he wants in his pictures, he never refers to them by scientific terms, but always as "secret," "elusive," or "psychic"—words of intuitive feeling. "Art," however, is a term he does not like to use in photography. "Of course there is art in it," he says, "and journalism and much nonsense too."

Dr. Herman Moses

As a doctor Moses earns his living. As a photographer, when he produces what he considers a successful print, his own satisfaction is sufficient compensation. "When I succeed in getting these abstract qualities, it is an extremely exciting, really creative experience. I would not take any more pictures if I could not do this kind of thing."

For many photographers, the size of the print is often just a matter of convenience. They generally make very large blow-ups only for exhibition purposes. Not so with Moses. He feels that the large size of his "big heads" is of extreme importance even when they are to be viewed in a small room. His standard size is 16x20, cropped close, and mounted on large white mats. "For the proper impact," Moses feels, "they need that size at least."

Once when a subject remarked about a Moses portrait

"Young girls are most concerned that you get the shot you want," says Moses. This one with the "elusive eyes" is the daughter of a sculptor and knows how to sit without posing.

of him, "I never knew I had such an interesting face," Moses kept silent. But what he felt like saying was, "You don't see it—I was able to reveal it to you!" And that pretty much sums up his attitude towards his work. It is not just catching an expression. It involves great effort in the studio (a room in his office-apartment), prying and probing to make the subject reveal himself. But that is only half the process. The rest takes place in the darkroom. Moses refuses to consider as creative artists those photographers who let someone else do their darkroom work for them, no matter what the reason. He is critical even of Henri Cartier-Bresson for that reason. "To be an artist, you must pay with your life, with long hours, of bleeding and sweating in the darkroom as well as with the camera."

He does not draw a line anywhere in the process between the time he enters his studio with the subject and the moment when he emerges from the darkroom with the finished print. And in discussing his work, he merges observations about the minutest details of finishing into the same sentences with remarks about composition and the subject. Technique and content are all part of the same thing with Moses. He would no sooner allow anyone else to make his negatives and print than he would let an outsider trip the shutter for him.

Moses was born 57 years ago in Germany, where photography is the national pastime and camera shops are as common as gas stations and drugstores are in

"I seldom go for smiles," he says, "but this was so spontaneous, I could not resist making the print."

This engaging but obviously studied portrait *left* is only an early stage in Moses' creative process. The final product, the "big head", *opposite page* came later in the sitting. "It is almost a different person," he feels. "Quietly ecstatic, full of love, nothing like the reserved girl who sat down to pose for me." Do you agree?

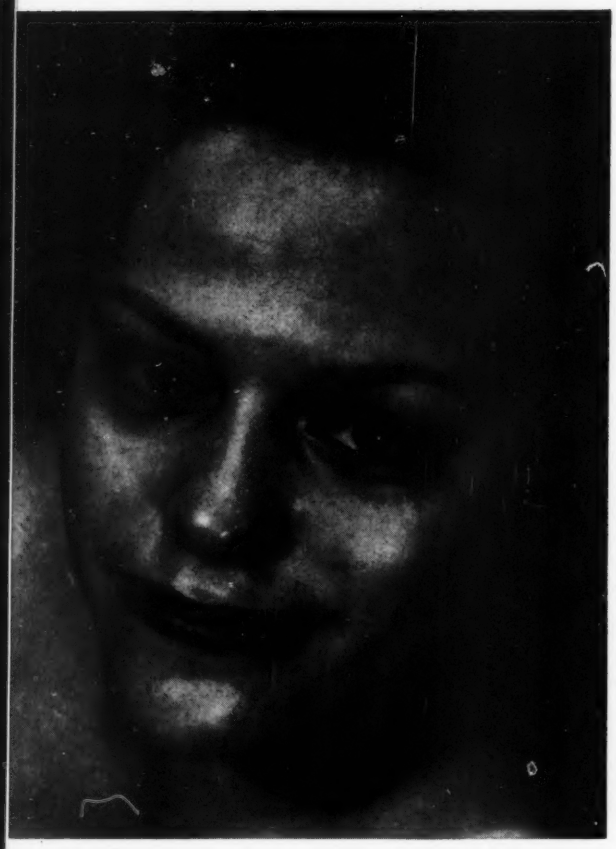
America. As a boy, his first camera was the ubiquitous Bullseye Kodak. He studied medicine in the 1920's and worked as a doctor for a time in Palestine and other parts of the Near East. He returned to Germany in 1928. When Moses realized that Hitler would soon stop Jewish doctors from practicing medicine, he decided to look for some other way to make a living. Since he had continued his early interest in photography, he thought he might be able to earn money making portraits. That was when he got his only formal training in the subject; he took lessons in retouching. Today, however, he restricts his retouching to print spotting. "Retouching is seductive," he maintains. "Taking out even the slightest fold or line in the skin destroys some elusive value."

Moses finally left Germany and went to the Panama Canal Zone in 1938. There he worked as a photographer for the U.S. Army and took first prize in a contest sponsored by the American camera club. He is a little modest about that award, because he feels he had a certain advantage: The winning print was a portrait of a prominent man active in the camera club.

In 1940, with the aid of army officials, he was allowed to enter the United States. But since he was not licensed to practice medicine here, he had to turn again to photography for a living, working for *Town & Country* magazine until his license came through in 1941.

"Men are usually too introverted, too vain to open themselves to the camera. That's why I think this *opposite page* is a success. He is kind and feels deeply, and I believe it shows up unmistakably" says Dr. Moses.

Though at first glance this *below* may seem grotesque, even brutal, Moses considers it "one of my most exciting heads." It is almost pure abstraction of a face, and it's because of the distortion and the blemishes as much as anything else you see."



For love, again

From then on, his photography was for love, not for money. In 1943, he had come far enough with his work to be given a one-man show by the Metropolitan Camera Club Council. But he still wasn't entirely satisfied, so a couple of years later, he enrolled in a course of photographic theory conducted by Ansel Adams at New York's Museum of Modern Art. It was there that Moses feels he learned how to handle "black-and-white crispness," the controlled use of contrasts without sacrificing soft effects, which is an important element of his technique.

The bulk of Moses' work is done with a 4x5 Linhof on a big Linhof tripod which enables him to hoist the camera almost to the ceiling for special angles, particularly with reclining figures. It also provides good support for the long exposures he prefers to use. Until recently his favorite exposure was ½ second. Now he uses no less than ⅕ second—with apertures of f/16, 18, or 22. Such long exposures are necessary because he doesn't like to use a lot of light. His maximum is three lights, two 500-watt floods and a smaller 200-watt for head lighting. His attitude toward lighting, Moses feels, distinguishes him from most professional portraitists. "I have no formulas the way they do, no preconceived lighting rules. I approach each victim with a chaste attitude and then improvise."

For the Linhof, Moses has four lenses: a 150mm Goerz Dagor, 180mm Voigtlander Heliar, 180mm Zeiss Tessar which he finds somewhat too sharp for much of his portrait work, and a 250mm Tessar which he uses often for his "big heads." Most of his final shots are made on Super Panchro Press Type B, which, he feels, gives him little or no grain. Some of his preliminary "sketches" are done with a *(Continued on page 105)*

how to buy a slide projector

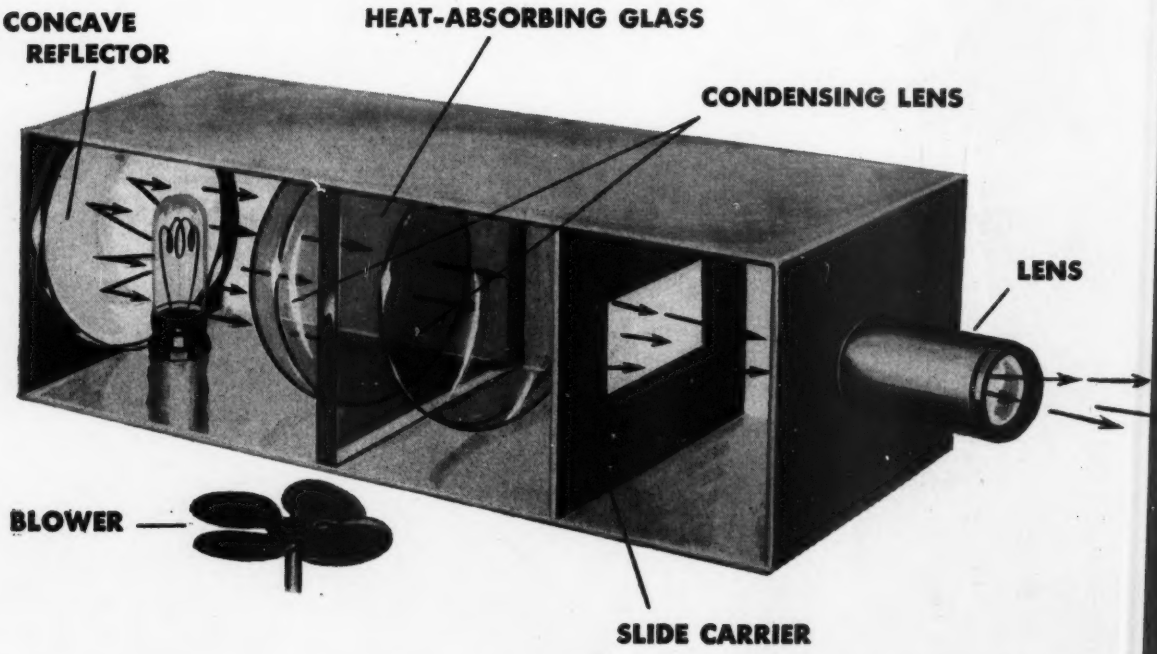
BY CHARLES HELLMAN

YOUR MOST BEAUTIFUL color slide is no better than the slide projector which you use to show it. It makes no difference if your miniature camera cost $400 and has the best lens east of the Rockies. If the slide projector has a mediocre lens, unbalanced illumination, or can't cover the entire area of the slide, your projected pictures won't look like much on the screen.

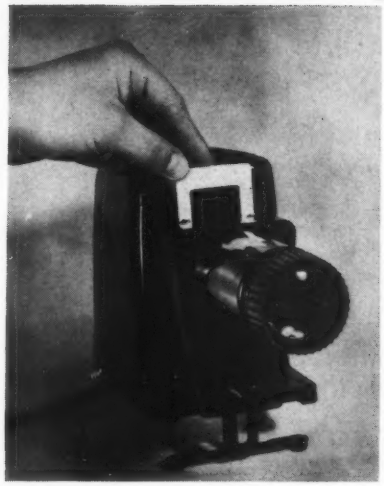
Yet, many serious amateurs who go to great pains to get the best in picture-taking equipment buy slide projectors in an offhand manner. One purpose of this article is to explain the basic operating principles of a slide projector. Even more important, it will focus your attention on desirable, and undesirable, features in the projector. You may never find a slide projector incorporating *all* the desirable features. But by testing, picking, and choosing in the manner outlined here, you can be sure of getting the best available. Although this article covers only projectors for 2 x 2 slides (35mm and Bantam) much of it applies to projectors for larger sized transparencies.

Below is a schematic drawing of a typical slide projector. Let's start at the rear. The projection lamp is placed in a precise location in front of a concave reflector. The lamp filament should be at the center of curvature of the reflector. Light from the lamp and from the reflector goes to the condensers, a pair of lenses which converge the light rays so that they pass through the slide and into the projection lens.

Located between the condensers is a piece of heat-absorbing glass. It is an infrared filter. Its purpose is to absorb long wavelengths of the rays from the lamp, which add nothing to the brightness of the image but generate heat in the slide. The best quality heat-absorbing glass shows only a slight tint and absorbs little of the light. The blower provides a steady stream of cooling air to the interior of the projector.



1



SLIDE CHANGER: VITAL PART

◁ Kodak unit has simplest type of slide changer. Inverted slide is forced in from the top, grasped firmly by springs, ejected below when next slide is pushed in. Other projectors use same system, but horizontally. To push the last slide out, it's necessary to use a dummy mount, or something similar.

Most common type of changer ▷ works with cross cut saw action, sliding from left to right or vice versa. Slide is inserted upside down. Some can be fitted with semi-automatic changing mechanisms (*see page 57*). Virtually all of saw type have simple integral device for ejecting last slide.

2

3

Slide goes into a rotary changer right side up. As disk is rotated it inverts slide, places it in projection ◁ position. This is compact, quiet. Novel Revere 444 has drum ▷ shaped changer with four slide-carriers spaced equidistant around rim of drum. Slide goes in right side up over illuminated viewer. Thumb rotates drum forward, slide is projected; empty carrier appears for second slide. Two more slides go into carriers in succession, then first one reappears, is removed to make way for fourth, and so on.

4

There are more types of slide changers than the four shown here. However, no matter what the type, a good slide changer *must* conform to certain requirements. The slide must be held firmly in the plane of focus; it should not lean towards front or back. All standard types of mounts—taped glass, metal frame, cardboard Readymount (*photo 25*), should fit without difficulty and in any sequence. The slide going into the projection position should eject the previous slide without overlapping it. The slide aperture in the changer must be big enough so that it does not cut off any part of the picture.

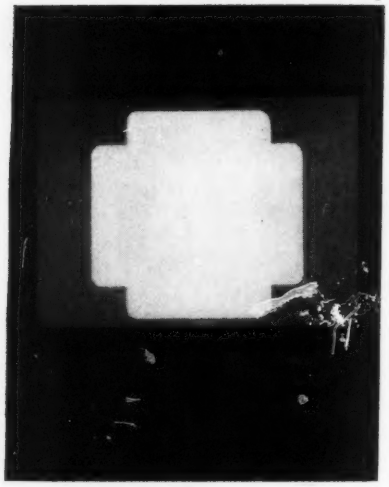
5

HOW DOES IT TILT?

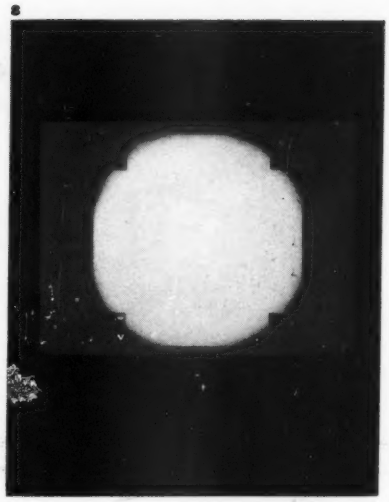
To align the picture with the center of the screen, the projector usually has to be tilted up or down a bit. Revere has a knob rotated ◁ screw; other makes, other means. Tilt control should be positive, simple, easy to find in dark, firm in its grip on projector. Sometimes slides, table, or screen are not quite horizontal. It's convenient if slide carrier can be tilted sideways. Here's exaggerated view.

6

7



8



ARE THE OPTICS ADEQUATE?

If a projector's optical system is inadequate, it cannot show your slides properly. It should be able to flood the entire picture area on the screen with clear, white, reasonably uniform light of sufficient brightness. *Not all projectors can do this!* MODERN has prepared a device to show quickly whether or not *your* projector is up to snuff on this score. In *photo 7* you see this gadget used in a projector which adequately illuminates the picture area for both horizontal and vertical slides. Compare this with *photo 8*, where the light fails to cover the edges of the picture area. Read the text at the bottom of the page for information as to how you can get this tester without charge.

Tests have shown that virtually all the standard makes of projectors now on the market have projection lenses which give reasonably sharp images over the full picture area. Some are better than others. When you go out to buy a projector take along a test slide which you know to be crisp and sharp all over. It should be mounted between glass to avoid buckling effects. Most common lens focusing mechanism is a threaded barrel which is turned to ◁ move the lens back and forth. It should be smooth, quiet, free of wobble, with enough tension to stay put where set.

9

10

IT HELPS TO SEE THE SLIDE

To help you choose the right ▷ slide, get it in carrier correct side up, an illuminated viewing panel is a convenience. This is on a Skan.

Some simple slide projector tests

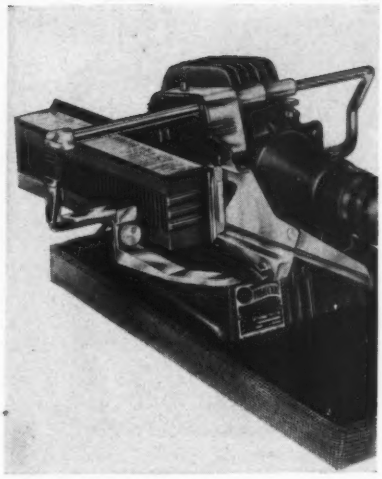
A few simple, practical tests will show whether or not a projector has an adequate optical system. Three things need to be determined: First, does the circle of illumination cover the full picture area of the slide? Second, is the illumination reasonably even? Third, is the light bright, white, free of streaks and color patches?

A good 2 x 2 slide projector should be able to show either 35mm slides (with picture area approximately 24 x 36mm) or Bantam slides (28 x 40mm). Unfortunately, not all the 2 x 2 projectors on the market can project Bantam size slides properly—the illumination falls off badly, or altogether, in the corners. If you take only 35mm slides, and have no intention of ever showing the Bantam size, it may be enough if the projector merely covers the 35mm slide area satisfactorily. Do not be content with the assurances of an advertising leaflet, or a sales clerk, that the projector illuminates the entire slide area—check it yourself.

With the cooperation of a leading optical manufacturer, MODERN PHOTOGRAPHY has prepared a pair of die-cut masks, one for the 35mm slide area, one for the Bantam size, which fit into the projector like a slide. These masks will assist you in determining the quality of illumination in the area covered by your slides. Projecting with an unmasked open aperture can be misleading and does not give a true indication of the effectiveness of the condensing system.

To receive these masks without charge, send your name and address (printed clearly) to *Slide Projector Editor*, MODERN PHOTOGRAPHY, 251 Fourth Ave., New York 10, N. Y. Insert the Bantam size mask in the slide carrier and turn on the lamp. *(Continued on page 56)*

11



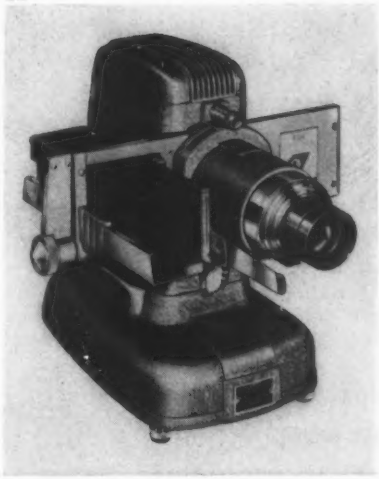
MAGAZINE SLIDE CHANGERS

One of the most popular gadgets on the market is the magazine type slide changer. This can be added to practically all the projectors which use the saw type slide changer (*photo 2*). The principle of most of these devices is the same. Selected slides are stored in a plastic or metal magazine, each slide in its numbered groove, correct side up, in any desired sequence. The magazine is then placed in the changer. ◁ As the slide changer is pushed back and forth, the slides are picked out of their grooves in the magazine, centered in the slide carrier and projected, and then returned to their previous locations in the magazine. In the fully automatic type of changer, the magazine advances by itself, introducing new slides. In the semi-automatic type, the magazine is advanced manually by turning a knob, but the rest of the slide changing cycle is automatic. Such slide changers fall roughly into two classes: those which are designed to fit only a specific make of projector (such as the TDC Selectron-Semimatic, *photo 12*), and those which, through the use of adapters, can be made to fit a variety of machines. In this category are the GoldE Index (*photo 11*) and the Airequipt (*photo 14*). Magazine slide changers may also be classified as to whether or not they will accept all the standard types of slide mounts—taped glass, metal or other frames, cardboard Readymounts (*photo 15*). If you now have hundreds of glass protected slides, it makes no sense to buy a magazine slide changer which will accept only cardboard Readymounts. However, if all your slides are in Readymounts and you have no intention of binding them in glass, such a changer may do. Another type of magazine changer is integral with the LaBelle projector (*photo 13*). In this, slides are stacked in a chute atop the projector, travel through it by gravity feed, resume their orderly arrangement in another chute below.

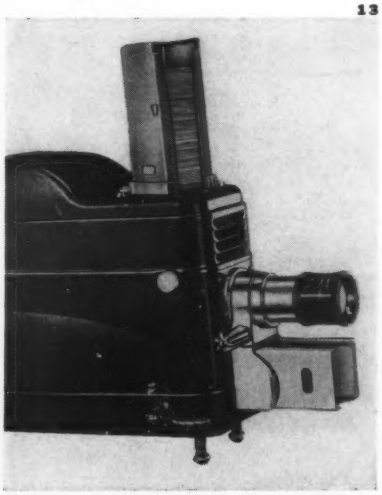
HAVE YOU FILM STRIPS?

Some projectors can be fitted with adapters permitting the use of long strips of film, instead of slides. ▷ Note the ease, or difficulty, of mounting the film strip adapter. Check that the projection gate does not scratch the film as it is moved.

12

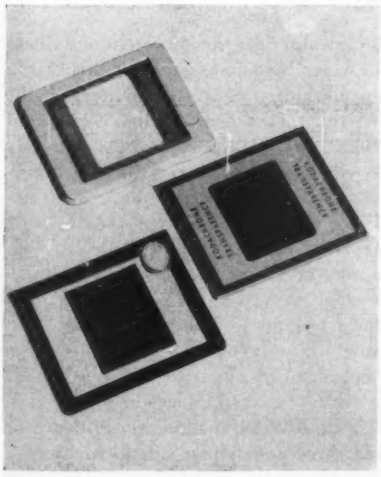


13



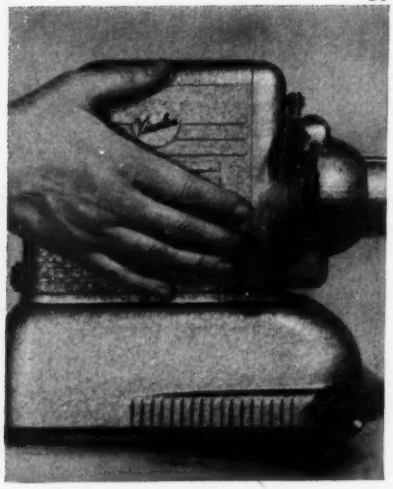
14

15



16

17



HOW HOT DOES IT GET?

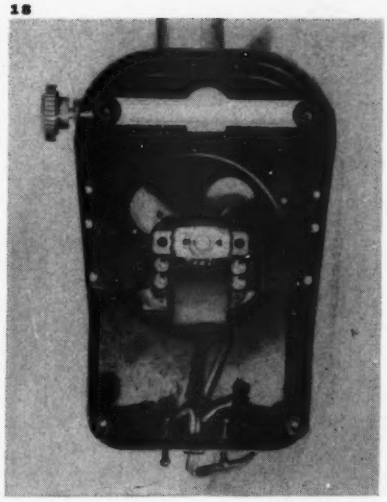
A projector operating with only a 150 watt lamp evolves approximately 2,000 calories of heat each minute. Unless this is removed the entire projector becomes very hot. Projectors of up to 150 watts generally depend on natural ventilation for cooling. These operate at much higher temperatures than 300 or 500 ◁ watt projectors which have ▷ forced ventilation.

A projector with a high surface temperature is a definite safety hazard, particularly if children or pets are present. Blower cooled projectors are so superior in operation that price and D. C. electric supply are the only valid reasons for getting a machine without a blower. A well cooled machine should permit you to rest your hand indefinitely on any external part of the housing, no matter how long the projector has been running.

In principle, all projector blowers are similar. An alternating current motor drives a fan which sends cool air through the lamphouse and around the condensing lens system. Some makes, such as Viewlex (*photo 18*) have integral fan in base. Hot air is expelled at top.

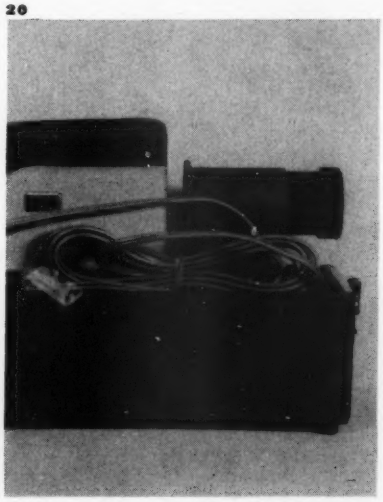
◁Revere has horizontal lamphouse; blower inhales through side of projector, exhausts hot air through opposite side. In Argus, and others, blower is not integral ▷ part of projector, but is contained in lower half of carrying case. Thus, 100-150 watt convection cooled unit

18



19

20



Projector Tests *(Continued from page 54)*

Project the mask outline on a screen, get as large an image as possible, and focus so that the edges are sharply defined. It should look like *photo 7*. Examine the illumination carefully. It should be almost as bright at the edges as in the center. There should be no noticeable "hot spots" or dark areas. Streaks of colored light across the center or down the edges of the image indicate that the optical system is inferior or out of adjustment. If the light fades noticeably, or is cut off sharply in the corners, the projector is inadequate for Bantam size slides. Test it with the 35mm mask and see how it covers that size.

An accurate exposure meter can be of considerable help in determining how even the illumination is. According to the specifications of the American Standards Association, the illumination at the edges of the picture area should be no less than 65 percent of the illumination at the center of the projection screen.

An incident light meter is easiest to use for this check. First, measure the illumination at the center of the screen. Then move the meter over to the corners of the screen and check it there. If the meter reads directly in foot candles, it will be easy to determine the differences in light intensity. Otherwise you may have to do a little figuring. There should be less than one-half stop difference in the exposures indicated by the meter. A reflected light meter may also be used with success. Readings must be made close enough to the screen so that the background can have no effect on the meter. However, be careful not to cast a shadow on the part of the screen which is being checked.

These are by no means exhaustive tests of a projector. However, if a projector covers the slide area with white, even light, it should show your slides satisfactorily.

21

can be converted to 300 watt blower type by changing lamp, adding base containing fan. Blower should be quiet, vibration free, should not direct blast of hot air into projector operator's face.

IS MAINTENANCE EASY?

Slide projectors, like any precise mechanisms, need to be kept clean, may need a new lamp occasionally. Be sure you can get into the machine without difficulty. This is how Brumberger opens up. Condensing lenses, heat absorbing glass, should come out for cleaning without need for tools.

Insist that the dealer show you how this is done. Dust in the optical system will cut down picture quality, and it is important that you be able to clean the system easily.

Projection lamps have bayonet bases, must be twisted before they can be lifted out (*photo 23*). Can your fingers reach the bulb easily? Is it simple or difficult to replace?

CASES ARE IMPORTANT

Every projector should have a suitable carrying case. It protects the mechanism from dust, hard knocks. Some cases, like that for the GoldE, are simply shells that fit over the top, latch onto base of projector itself. Other types come in two pieces, with separate bottom half attached to projector (*photo 25*). Small projectors may be fitted into special cases that hold slides, spare lamp, etc. Compartment for extra lamp is great convenience in any type of case.

22

23

24

25

UL INSPECTION VITAL

Examine the name plate of the projector for the UL (Underwriters' Laboratory) seal of approval. This is your assurance that the projector has passed inspection against electrical hazards.

Do not buy a projector unless it has the UL seal on it. Projectors draw a considerable amount of current. Flimsy wiring, overloaded switches, can be a fire hazard, may also result in some unpleasant shocks.

(*Continued on page 115*)

26

why the *blur?*

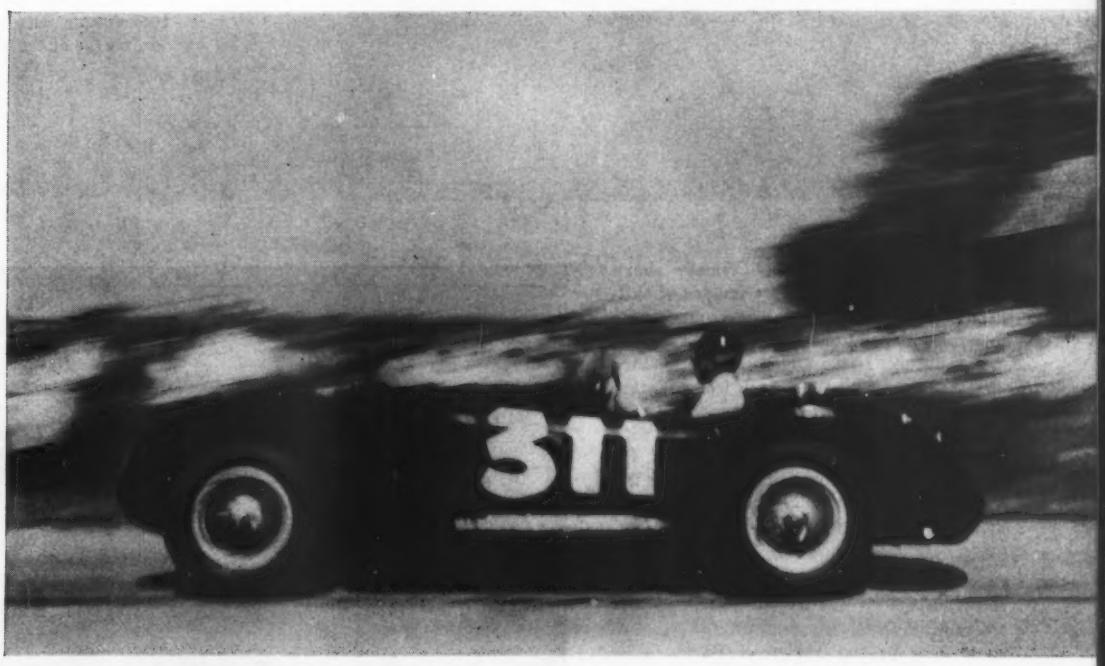
by HERBERT KEPPLER

A dancer's skirts swirl, a racing automobile snarls down a straightaway, a hurrying commuter puts on a last burst of speed to catch a train, children race across a lawn, a group of musicians blasts a jagged tune in a murky atmosphere—how do you interpret such action? Do you stop it dead with electronic flash or blur it with a slow camera speed? Do you swing your camera with the motion? Should the main subject be sharp and the background blurred, or vice-versa? These are the constant problems of the photographer who wants to picture action.

The ideal solution is probably unattainable. Portraying action in a still photograph is essentially an attempt to portray a constantly changing event in a medium that is static. Since a perfect solution is unobtainable, we look for the best compromise—and the compromise depends greatly on just what you wish your audience to feel when the final print is seen. If your picture can communicate your feeling about the original action, your compromise is a success.

How do you photograph a dancer? This problem (*left*) confronted Maurice Crespi. The performer was Spanish flamenco dancer Carmen Amaya. Crespi planned to illustrate one particular movement where the body was held rigid and the skirt whirled around. The photographer felt that blurring the entire figure would not correctly depict the movement. Neither, he reasoned, would stopping the entire action with electronic flash or a fast shutter speed. Instead Crespi chose a slow shutter speed (1/50 sec.) for his Rollei and made the exposure at f/3.5 on Super-XX with the aid of two photofloods. Was his technique successful?

Quite a different action puzzled photographer David Trooper, an automobile racing fan. A car has only four moving parts visible to the viewer—its wheels. Yet in action it can give a tremendous feeling of fast movement. How do you convey this action to your viewer? Trooper was familiar



◁ **Partial blur:** By blurring the whirling skirt in the direction of the motion and holding rest of the body sharp, Maurice Crespi sought to convey the actual movement of one part of dance by Carmen Amaya. (Technical data on all pictures can be found in text.)

△ **Double blur:** The crowd was blurred by photographer David Trooper's panning motion. Relatively slow shutter speed blurred car body to a lesser degree, intensifying motion.

◁ **Contrast blur:** The relaxed gateman was contrasted with the scurrying commuter by Jack Demaracaux. Extremely slow shutter speed (1/5 sec.) reduced the commuter to almost nothing save one foot propelling him along. Demaracaux used a tripod, shot many test shots before getting exactly what he wanted.

Overall blur: After clear, sharp pictures failed to convey frenzied music and musicians, Jay Maisel blurred entire picture with a slow shutter speed (1/10 sec). The movement of the musicians while playing, plus the deliberate camera movement when the shutter was snapped, gave Maisel the effect he was after. ▷

Combined blur: Primary sharp image plus secondary images of children and blurred background were all made at once using a 1/25 sec. exposure. Don Langer caught primary images with short flash from Bantam 8 bulb. Slow shutter speed (1/25 sec.), plus panning the camera with the action, yielded other images. He sought to convey in the picture the different world of a child's play. ▷

with the standard technique of panning the camera in the direction of the action to render the subject sharp and the background blurred. This technique, however, still tends to reveal the car as a static element while the background emerges as the moving feature—hardly the true picture. Trooper varied the formula. The car, a Jaguar XK-120C roaring down a straightaway in a sports car race, was photographed at 1/100 sec. at f/8 with a Rolleicord, Plus-X film (*picture, page 59*). Trooper panned his camera with the car and made his exposure as the car passed directly before him. The pan blurred the background. The relatively slow shutter speed imparted a partial blur to the body of the car and to the wheels. Yet on the wheels you can see just a trace of the wire spokes and hubcaps. While the picture would hardly satisfy the viewer who wished to see as much of the car as possible, Trooper feels it imparts what he was after—a sports car speeding down a straightaway during a race.

Human beings are easier to deal with than cars, but how much of a commuter do you see when he's racing to catch the 5:15 home? Not much, thinks photographer Jacques Demaracaux. But you do see something of him—even if it is little more than a blur. Demaracaux noticed the gateman leaning near the train gate and wanted to contrast him with the commuters who were shooting like bullets through the gate. He set the speed of his Rollei to 1/5 sec. and made an exposure at f/3.5 on Plus-X film (*top, left*). The single solid leg of the commuter lends added interest. It was caused by the physical act of running—a foot on the *(Continued on page 104)*

"You press the button, we do the rest."

The story of George Eastman, who revolutionized photography. In two parts. Part one by Cora Alsberg

IN EVERY FIELD of endeavor there is one man whose name stands above all others. For the car it was Henry Ford. He did not invent it, but it was his genius which made it practical for the masses to own automobiles. In electric light it was Thomas Edison. Artificial illumination was possible before him, but he was the first to provide an electric lamp at moderate cost for every home. The man in photography who fits this category is not the Frenchman Daguerre or the Englishman Fox Talbot, but the American bank clerk whose name was George Eastman. 1954 is the 100th anniversary of his birth.

Sixty-six years ago photography was still a primitive craft. All the essentials were there—cameras, lenses, and gelatin-bromide emulsions. There was even a roll film on a paper base which Eastman had devised in 1884. But it remained for this same George Eastman to combine all these elements into a marketable, simple and easy-to-operate unit. This he did in 1888 when he introduced the No. 1 Kodak.

Modern photography began overnight with this camera which revised the old way of making pictures and set the pattern for millions of cameras in use today. It was a simple box which combined roll film and freedom from arduous home processing.

The slogan was, "You press the button, we do the rest." Glass plates, darkrooms, and intricate cameras were no longer necessary for the amateur. Now anyone could expose film and ship it off—camera and all—to Eastman's firm for finishing. This simplification by Eastman was the turning point that changed photography from an avocation of the few to a hobby for the millions.

George Eastman was born 100 years ago this July. His life reads like the plot of an Horatio Alger story. At 23 he was just an amateur photographer who worked as a bookkeeper in a bank, and wanted to take pictures on his vacation. To make a simple snapshot by the wet-plate method of the day he carried 60-70 pounds of equipment.

Then he read about a new plate in the *British Journal of Photography*—one that could be exposed when dry instead of wet. He experimented with making his own dry-plate emulsions at home. These experiments led to the idea of making dry plates for others.

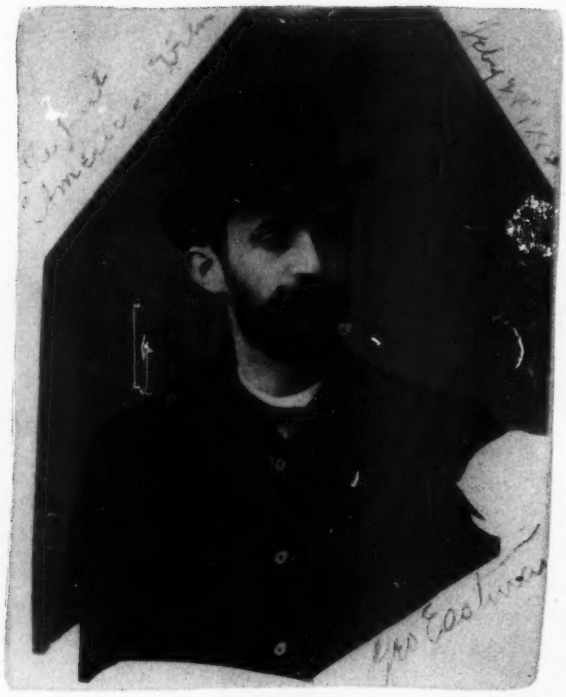
Soon photography absorbed all of Eastman's free time. With almost unbelievable energy, he worked by day at the Rochester Savings Bank, cooked emulsions on his mother's stove at night, and pored over technical journals. When week ends came, he said, "I slept from Saturday night until Monday morning. I would lie down after dinner and knew nothing until Mother called me for breakfast. Right after breakfast Sunday morning I went to sleep again and stayed asleep until she called me for dinner and again at supper. It got to be almost automatic. I could go to sleep on schedule by the watch. I could feel myself going to sleep as I got up from the table. When Monday morning came I was slept and rested and charged for the week, feeling as fresh as though I had never lost a night in my life."

Only three years after he first used a camera, Eastman was a manufacturer of dry plates. By the time he was 34 he had produced the Kodak camera and reduced amateur photography to a simple operation.

In the years that followed, Eastman further applied his genius for simplification to photography. Like Ford, he knew how to make ideas marketable and how to direct research for better methods.

The results? An Eastman chemist produced the first commercially successful transparent roll film. More simple cameras (including one for $1), movie film, and the best early American-made panchromatic plates followed. The production of safety film led to a "You-press-the-button,-we-do-the-rest" camera for home movies. And research on color film, beginning in the 1900's resulted in

At 36 George Eastman was already a success. His Kodak cameras, introduced in 1888, two years before, had simplified photography for thousands—built a million-dollar business. Vacationing in Paris he went to the studio of photographers Nadar and son—posed for this portrait.



Before the Kodak camera, Eastman produced a stripping film—tested it by making this signed and dated self-portrait at 30. In use the developed emulsion was stripped off its paper support, then transferred to a piece of gelatin prior to printing. Marketed in 1885, the film was later cut in 100-exposure length rolls for use in No. 1 Kodaks.

a continuing stream of products. Photography became more than a hobby for millions. It became indispensable.

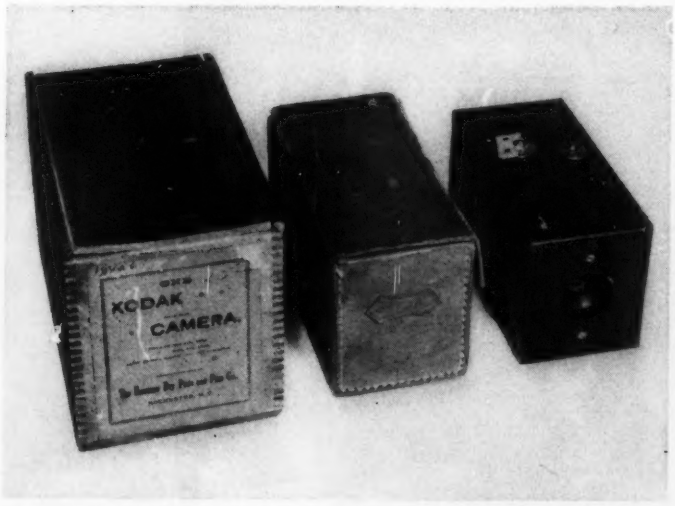
But before all this—even before the Kodak camera—Eastman made two essential changes in glass plate photography. The story of his later contributions actually begins there.

Photography the hard way

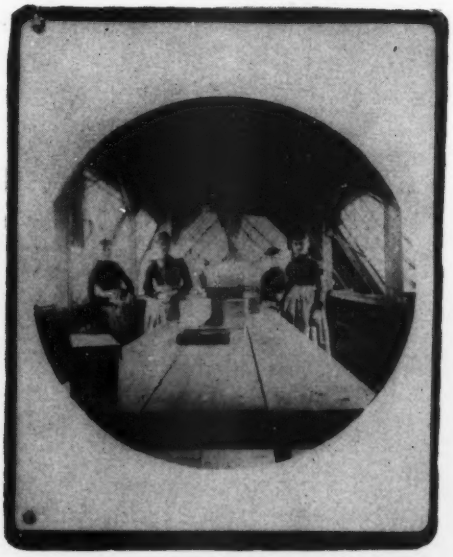
How many amateurs would take pictures today if each exposure had to be made on glass? There was no other practical choice until 1885. The amateur who didn't coat his own, however, could buy some of the fastest plates made from the new Eastman Dry Plate Company of Rochester, N. Y. These plates took pictures at the amazing speed of 1/50 second in sunlight. While George Eastman was establishing this solid reputation, he was also thinking of ways to replace glass with a lighter support to ease the photographer's load.

For his base, Eastman went back to the days of pioneer Fox Talbot and used paper. Long strips coated with the latest gelatin-bromide emulsion formed his early rolls. To use them Eastman and an associate devised a holder which fitted into the back of existing cameras much as a sheet film attachment does today. But the coated paper had its drawbacks. At best, the material was semi-transparent. Even castor oil applied before printing didn't eliminate paper grain.

The next step was a half-way measure. Since the right transparent base could not be found, why not strip the emulsion off the paper after developing and fixing? When this "skin" was transferred to a piece of gelatin and protected with two coats of collodion, the amateur had a transparent negative for printing. On the paper



Shipping box, *left*, replaced darkroom work for users of No. 1 Kodak camera of 1888. Unopened camera with exposed roll was mailed to Rochester for processing. Price of loaded camera, including case, $25.



For $10, one hundred mounted prints like this one were returned to the user along with reloaded camera. Shown is printing room on top of Eastman factory.

Eastman placed two layers: the bottom one was soluble gelatin which dissolved for the stripping operation, then the sensitive coating itself, hardened with chrome alum.

This was American Film, used for only little more than a year in the first Kodak camera—although in 1885 when it first appeared, Eastman thought he had created a popular way of taking pictures. He "expected that everyone who used glass plates would take up film. . . ." He found instead that the number who did so "was relatively small, and in order to make a larger business we would have to reach the general public."

What did people really want?

Eastman thought that darkroom work and intricate cameras might be the sticking points for the popularization of photography. He considered a new kind of camera—one which reduced picture making to its simplest terms. This idea became a salable reality in the form of the famous No. 1 Kodak camera of 1888—the small black box which made 100 round pictures, 2½ inches in diameter, on a roll of stripping film which came loaded in the camera. The speed was set at about 1/25 second, the opening of the fixed-focus symmetrical doublet lens at f/9. Now the user only pulled a string to set the shutter of the 1½-pound camera, sighted along the top (there was no viewfinder) and pressed the button. After exposure the entire $25 camera was sent to Rochester where the strip of American Film was developed and printed. Mounted prints and the reloaded camera were returned, all for $10. Eastman's slogan caught on immediately. The name "Kodak" which he is usually given credit for inventing was terse, easy to remember, and came to be worth a fortune.

Only a year later 13,000 amateurs had Kodak cameras. Eastman's staff handled 60-75 rolls of exposed film a day—totalling 6,000 to 7,500 mounted prints. *Wilson's Photographic Magazine* had this to say about the new camera: "It is not much more than a year ago that the world became acquainted with a little black box which announced itself as the 'Kodak Camera.' In the short period of its astonishing existence, this little box has persuaded thousands to the pursuit of photography, and its odd name has become a household word. It is the pioneer of a new type of camera, the creator of a new class of photographers, and has brought all the pleasures of the art-science within the reach of those who never thought they should enjoy them before it came upon their view. . . . There really seems no end to the revolutionary proceedings of Mr. Eastman and his company."

On the factory roof, continues the magazine, is "an airy printing room . . . which looks out on the Genesee Valley . . . where quick-fingered girls fill and empty the [printing] frames in the long racks down its sides. . . . When shortly the larger Kodaks come out . . . and the new transparent film, there will be very little more to wish for."

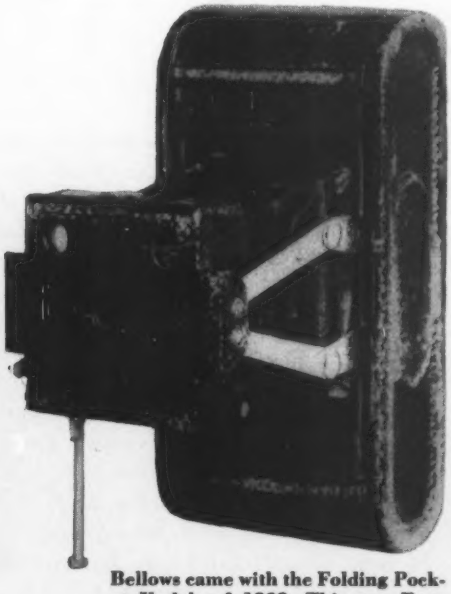
A better film

Even before the No. 1 Kodak was successful, Eastman realized that a stripping film was only half the answer. A transparent film base made of flexible but durable material would eliminate the entire stripping operation.

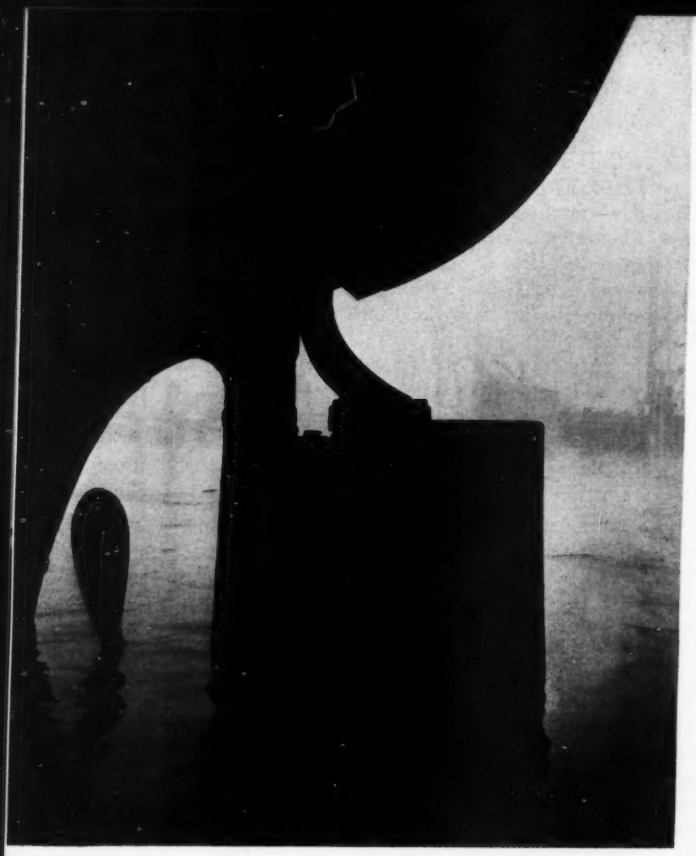
Carrying out Eastman's ideas, his first chemist, Henry M. Reichenbach, substituted a collodion base for the paper, but this was too weak. Then followed work with nitro-cellulose in various solvents. Hundreds of strips of film came out of the lab. Some *(Continued on page 94)*

All photos courtesy of George Eastman House, Rochester, N. Y.

This rare picture of the No. 1 Kodak in use is on display at George Eastman House in Rochester. Ready to press the button, the user sights across the camera top—viewfinders for Kodaks came a year later.



Bellows came with the Folding Pocket Kodak of 1898. This was Eastman's first simple folding camera.



SILHOUETTED STERN of freighter anchored in Islais Creek stands in bold relief against foggy background. Interest is enhanced by uneven black reflection in water and detail on ship hull. Rolleiflex, f/8, 100th.

DELICATE PASTELS emerge as fog sweeps (it's blowing in at 15-20 miles per hour) around north tower of Golden Gate Bridge in early morning. Taken with a 4x5 Graflex, equipped with a 7-inch Zeiss Tessar lens. Daylight Ektachrome, f/3.5, 1/100 second.

FOG

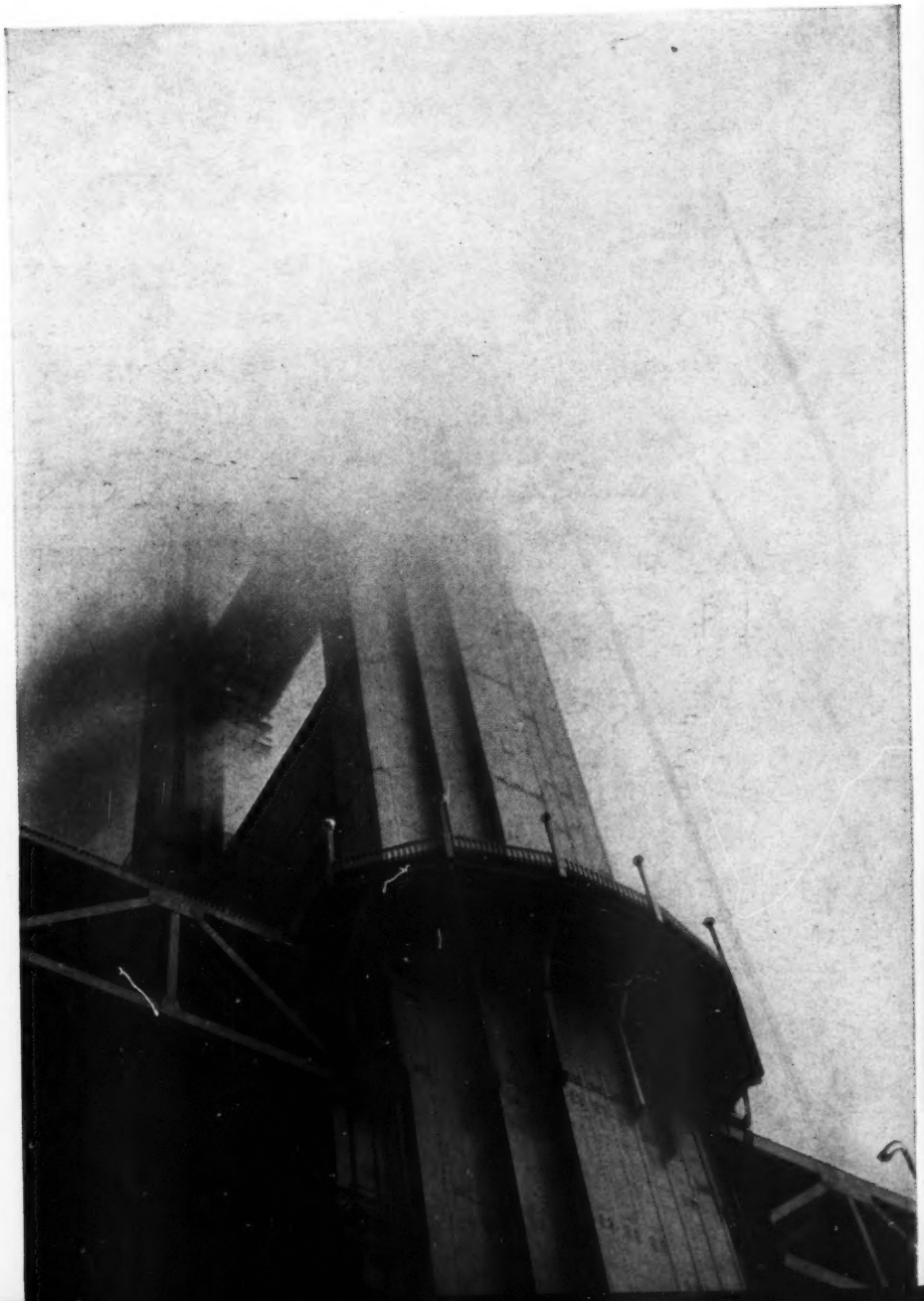
San Francisco is a great city. And, in common with other great cities—like Paris, Vienna, London, New York—her native sons and adopted sons have long sung her praises. Dong Kingman painted her, some of William Saroyan's most sensitive stories and plays took place on her inspirational streets. Herb Caen, the brilliant, witty columnist of the *San Francisco Examiner*, writes a daily journal to his beloved "Baghdad-by-the-Bay." And for three years photographer Fred Lyon has been working on his unique visual love letter to her. We show you a sampling culled from it. Let the sun-worshippers have their deadly golden days. The lover of San Francisco will tell you that he'll take the fog—and who can blame him? San Francisco fog doesn't fall like a heavy blanket. It dances in with the lyric delicacy of a Markova. It doesn't depress, you feel the world is yours and you can make it what you will. The already beautiful woods become incredibly beautiful. Fog changes the city streets to myriad, moving fantastic color forms—unreal and yet like the dream you most want to come true. Just look at what Fred Lyon found—misty visions, mauve afterglows, quiet pastorales, warm reds, cold grays, harsh modernistic silhouettes, today's Huck Finn fishing off a city's pilings instead of a river bank. But Fred Lyon not only saw and felt these things, he photographed them with all the skill of a professional and the love of an amateur. This, then, is his love letter to San Francisco—simple, but lyric. —*Jacquelyn Judge*

AFTERNOON FOG SWEEPS gently through trees on Skyline Drive. Delicate tones of scene are counterpointed by red-shirted figure. Daylight Ektachrome. Rolleiflex, f/3.5, 1/100 second.

SOMETIMES FOG WETS streets, gives wonderful opportunity for reflecting color. Atop Nob Hill, Lyon felt Daylight Ektachrome might produce too warm tones for particular scene. So he used Type B Ektachrome to get colder effect, apparent in grays and yellows. Rollei, 5 sec., f/5.6; foreground light is from another car.

PEDESTRIANS STOP obligingly for 5 sec. exposure in Twin Peaks shopping district. Neon signs produce colorful fog intensified by warm tones of Daylight Ektachrome. Taken with a Rolleiflex. Lens opening was at f/4.

LIGHT FROM SUN which had just set produced a mauve afterglow in this shot of Golden Gate Bridge taken from St. Francis Yacht Club. Photograph was reversed for layout. Taken with Linhof Technika, 15-inch Cooke lens. Exposure: 6 sec., f/8, Daylight Ektachrome.



GREEN PICTORIAL VIEW of ducks swimming in Golden Gate Park was made in low clinging fog. Framing of scene with delicate tree leaves and foreground of shoreline effectively holds otherwise scattered objects together. For this lyric picture: Rolleiflex, Daylight Ektachrome, f/3.5, 1/25th.

WHEN FOG MOVES as fast as it does in San Francisco, the photographer must move fast. North tower of Golden Gate Bridge was disappearing in a swift-moving blanket of fog when Lyon caught the soft colors with his Nikon. Taken on Kodachrome, the exposure was made f/4 at 1/100 sec.

TWO COMPLETELY DIFFERENT pictures can be made from the same spot at the same time. Proof: Shot *below* and the bridge tower *left* were made at same place, same session. To Lyon, rusted steel bulkhead seemed good chance to introduce texture and balance composition with a form repetitive of fading bridge. Seagull was worth waiting for. Rolleiflex, f/5.6, 1/200th.

SUN DIRECTLY BEHIND FOG gives more light than the inexperienced eye might expect. Expert Lyon shot this f/16, 1/100 sec. To bring out dark contrast of sky and trees at the left, he placed a medium yellow filter on his Rollei. Picture was made near crest of ridge of Waldo approach to Golden Gate Bridge.

FOG SOMETIMES OPENS momentarily to reveal a new scene. In this case, Lyon was working on another picture. Suddenly fog parted and he saw a boy standing on abandoned ferry slip pilings on San Francisco waterfront. He swung the camera and made a grab shot. Not until he saw proofs was he able to make out that boy was fishing. Taken with Rolleiflex, f/5.6, 1/200 sec.

1

2

3 in 1: Peter Basch solves a co

The photographs on these two pages are black-and-white copies of color transparencies made during the course of an assignment by Peter Basch which resulted in this month's cover. The assignment (and cover) grew out of a discussion of the difficulties of showing three heads in one picture.

Basch came up with an intriguing idea. Why not take three models, each representing a different kind of beauty, shoot them against a neutral background, and arrive at a photograph which would demonstrate the three kinds of beauty? Our answer was fine and go ahead—but wouldn't it take a long time to work out the cover idea with the three girls and wouldn't this result in fabulous model fees? It might, said the intrepid Basch, but he'd see what he could do setting himself a limit of one hour's working time.

The result of the one hour? Forty transparencies—and a multitude of good cover ideas.

Basch chose his models with care. The three were very different in appearance, *photo 1*. Bette Threatt, *left*, a model and actress, is of American Indian ancestry. Her hair is raven black, her features almost stoical. To Basch she has "a classic savage perfection." Exilona Savre, *right*, with her long blonde hair represents an extreme feminism, a European kind of beauty. The face of Evelyn Tripp, *center*, topped with short reddish-brown curls, seems to combine the sophisticated modern American woman with the delicate beauty of the past.

The three models were immediately and continuingly cooperative. None tried to become the center of attraction. Each took directions willingly and quickly. First Basch tried a series of profiles, *photos 2, 3, 4*. He hoped there would be a possibility of stripping them in one against the other for a triple profile shot. During this series, he tried shooting with

3

4

5

a cover problem

colored gelatins over the lights, so that the original of *photo 2* is red, of *photo 4* is golden. Trying the classic profile of Bette Threatt against the full face of Evelyn Tripp, he began to arrive at a solution, *photo 5*. Then he tried a combination of full face, profile, and three-quarter, *photo 1*, but felt that the result might be confusing for the needed poster effect of a cover. Finally he used two profiles—one vertical, one horizontal—against the full face, *see cover*, and ended with a solution to the 3 in 1 problem, satisfactory to him and to us.

The equipment, which had to be kept to a minimum because he needed speed of operation in his limited hour, was quite simple. A 4x5 Linhof, equipped with an 8¼-inch Commercial Ektar lens, Ektachrome Type B, several 750-watt spots, and one small spot.

Obviously, he varied the number of lights with each pose. Exposures (no data kept) were by meter reading.

closeups with a

by NORMAN ROTHSCHILD

Focusing a 35mm camera at the distances for which it was intended, generally 3 feet to infinity, is relatively simple. Closeups are different. Accessories must be used to provide focusing closer than the 3-foot limit. If your camera does not have an interchangeable lens mount, your choice of closeup attachments must be limited to devices employing supplementary lenses. With them you can focus to 10 inches or closer.

If your camera's lens is removable, you can use supplementary lenses or, preferably, some device to increase the film to lens distance. This can be an extension tube, bellows extension or reflex housing.

This article is designed to help you choose the proper attachments for your camera, needs and pocketbook. On these two pages, you see three examples of closeup photography at various camera-to-subject distances. With each is a short discussion of the type of devices best suited to that particular technique. On pages 78 and 79 you will find a breakdown of the various types of closeup attachments available, while on pages 80 and 81 lenses, depth of field, aperture, and other problems are discussed. Beginning on page 82 is a near comprehensive list of all closeup attachments. Hints on lighting, focusing and exposure are given on page 40. Check your needs carefully. A proper choice of equipment is essential to good closeups. But you must then learn to use it properly.

10 INCHES TO 3 INCHES: **Standard plus 1, 2, or 3 supplementary lenses are useless when taking a picture such as this eye at 4 inches. Stronger lenses, although available from optical supply houses, tend to degrade the image. A ground glass device (*see photo 8, page 79*) was used to photograph the eye. A single lens reflex camera, of course, would need only a lens extension (*photo 7, page 79*). (Note: Ring in eye pupil was caused by light from Mighty Midget Closeup Ring electronic flash. Its flash tube surrounds camera lens mount.)**

35 MM CAMERA

ALL PHOTOS BY AUTHOR EXCEPT AS NOTED

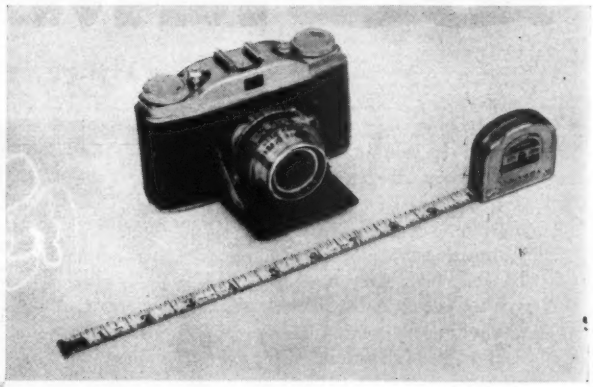
△ **3 INCHES OR CLOSER:** It's almost essential to use a camera with a removable lens if you plan to make pictures such as this butterfly's wing, only 2 inches from the camera. Focus must be extremely accurate as depth of field is very shallow. Reflex housings (*photos, page 78*) and reflex cameras with lens extensions (*photo 7, page 78*) are preferable. Ground glass devices (*photo 8, page 79*) are not as desirable unless held firmly in position.

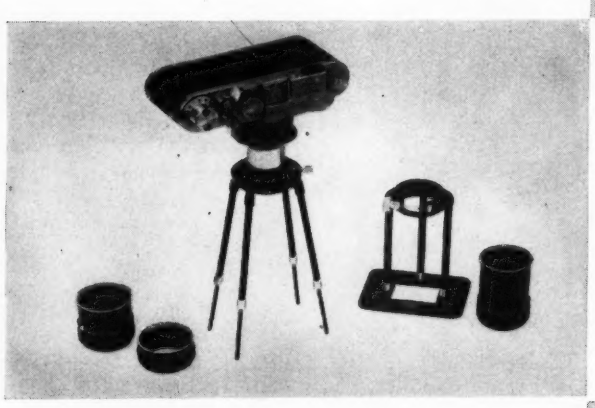
◁ **3 FEET TO 10 INCHES:** A ruler to measure camera-to-subject distance plus a supplementary lens to allow your camera to focus beyond its three-foot limit (*photo 1, page 78*) are all that's necessary to make a portrait such as this at 15 inches. However, if you intend to do much closeup work at these distances, rangefinder supplements (*photo 4, page 78*) and other devices (*photos 3 and 5*) are handier. Focal frames (*photo 6, page 79*) can also be used, particularly if camera has no rangefinder.

WHICH OF THESE EIGHT BASIC CLOSEUP ATTACHMENTS

1. Supplementary lenses ▷

Supplementary lenses fit over camera lenses in filter adapter rings. Although they can be used with any camera, they are generally employed with cameras not having interchangeable lenses. They come in various strengths and can be used in combination for even greater magnification. For best results, they should only be used with small lens apertures. Accompanying instructions generally give working distances and field sizes. Camera-to-subject distance must be measured with ruler.



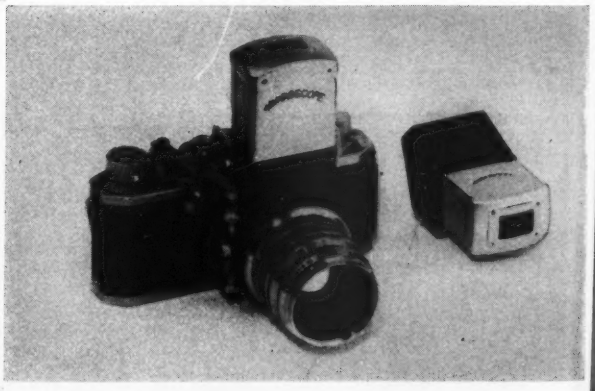


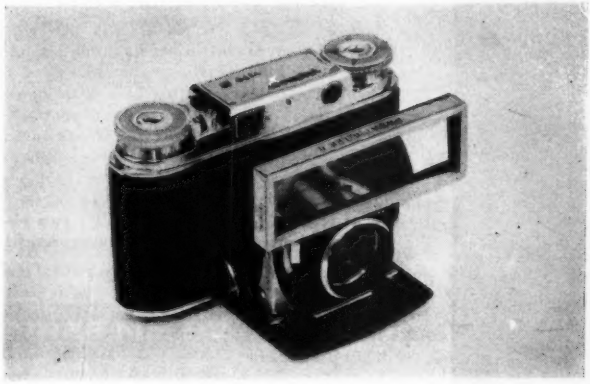
◁ 2. Fixed focal frames

Fixed focal frames, which can be used with nearly any camera, eliminate the necessity of measuring camera-to-subject distance. The distances are fixed by the device. Most focal frames outline the area they cover. They may employ supplementary lenses or extension tubes such as with the Leitz Beloo shown attached to a Leica. The Belun, also shown, is for closer copying. The mask indicates the picture-taking area.

3. Reflex housings ▷

Reflex housings, such as the Mirroscope, are inserted between lens and body of cameras having interchangeable lenses. They provide ground glass focusing images up to the moment of exposure. Depth of field, framing, the effects of extension tubes or supplementary lenses, can be seen directly on the ground glass. These devices represent the most suitable means of making closeups, with cameras other than single lens reflexes. Camera here is a Canon.





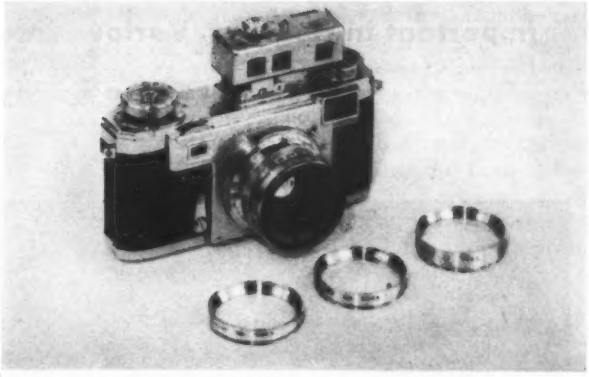
◁ 4. Rangefinder supplements

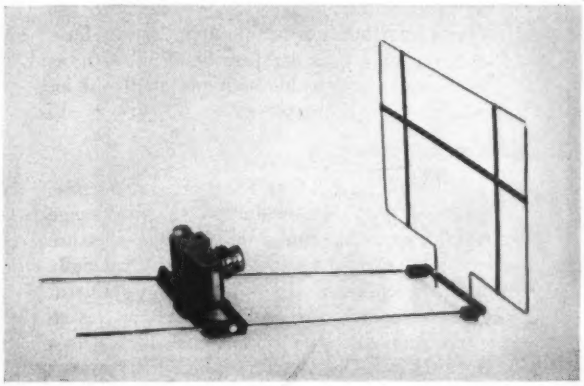
If your camera has a coupled rangefinder, one of these devices, similar to the Proximeter shown on the Voigtlander Vito III will allow you to use your rangefinder-viewfinder for focusing and framing. They employ an attached supplementary lens over the camera lens, as well as a correcting prism over the finder windows. Like ordinary supplementary lenses, they are available in a number of strengths.

PHOTOS BY CONRAD STUDIOS

5. Accessory close-rangefinders ▷

Close-rangefinders, like the Zeiss Contameter shown on the Contax, provide an accessory range and viewfinder which is used instead of the camera's range and viewfinder. Such devices fit in the accessory clip atop the camera for which they are designed. Supplementary lenses are employed over the camera lens in conjunction with the supplementary rangefinder.



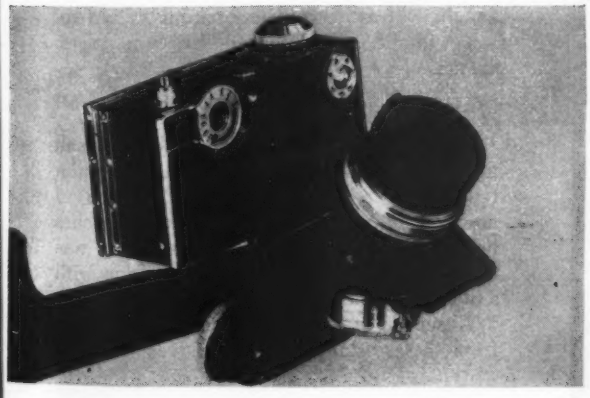


◁ 6. Variable focal frames

Variable focal frames, similar to the Cal-Cam shown here with a Kodak Pony camera, can be used with any camera. They provide accurate framing and automatic camera-to-subject measurement. Anything framed by the wires and in the same plane will be included sharply in the picture area. Variable focal frames such as this are for use with supplementary lenses.

7. Lens extensions ▷

Bellows attachments, such as the Multiscope shown with an Exakta VX, can be used with most eye- and waist-level reflex cameras. They provide a variable and continuous focusing range. Increases in exposure time at any given setting are generally marked on the bellows track. Focusing, framing and depth of field can be seen directly on the ground glass. Extension tubes, on the other hand, provide a fixed focusing distance and magnification. The focusing extension tube is actually a compromise.

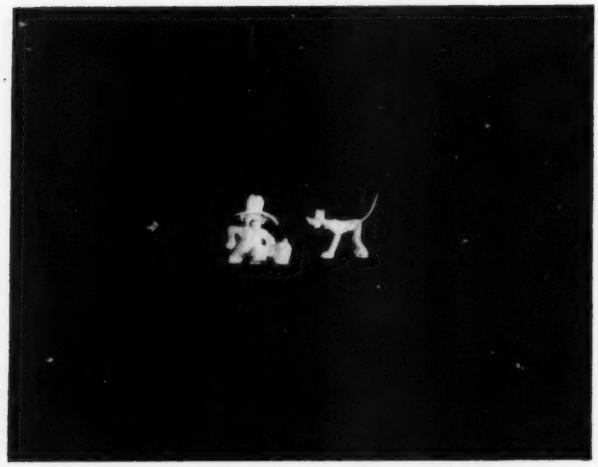


◁ 8. Ground glass devices

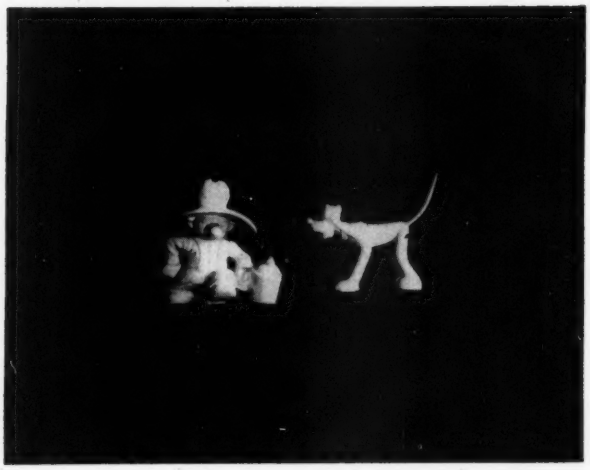
Ground glass devices, on the style of the Speed-O-Copy shown in use with an Argus C3, can be used only with cameras having interchangeable lenses. These devices provide an auxiliary ground glass for focusing through the camera lens. When the image is sharp and correctly framed, the ground glass is removed and the camera body slid or fitted behind the stationary lens for the actual exposure. Only stationary objects can be photographed. Use supplementary lenses or lens extensions.

Which lens type is best? All about depth of field ▶

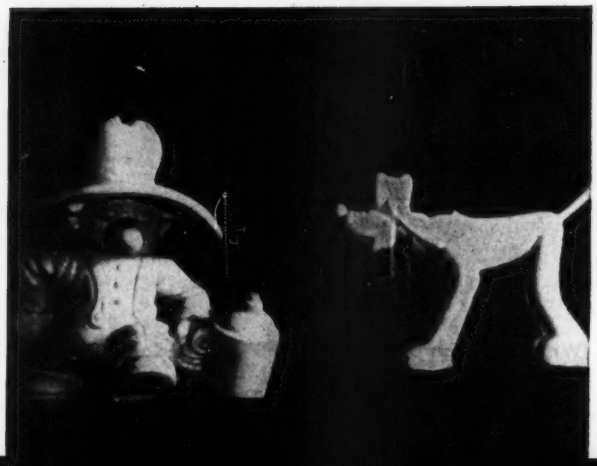
The proper use of lenses is important in closeups. Various focal lengths are also handy.



28 MM



50 MM



180 MM

What kind of a lens should you use to make closeups? Large aperture lenses such as f/1.5 and f/2 should not be regarded as first choice for closeup photography. Although they can yield creditable closeups, the best results are generally obtained from either smaller aperture lenses or lenses specifically computed for closeup work.

If you have a non-interchangeable, large aperture lens, however, don't use it at its smallest openings. Large aperture lenses generally yield best definition somewhere between f/4 and f/5.6. They will probably still remain acceptable through f/8 or f/11. Beyond this point, although the smaller aperture will yield a greater depth of field, the overall definition may not be acceptable. If you intend to use a large aperture lens for close work, therefore, try to group your subject material with as little depth as possible so you can avoid an extremely small aperture.

Special lenses

Although an f/3.5 or f/2.8 general purpose lens will probably produce a sharper image at f/16 or f/22 than would a large aperture lens, better results can be had with specially designed lenses. So if you intend to do a great deal of closeup work and your camera has an interchangeable lens mount, such lenses as a Goerz Dagor, Goerz Artar, Schneider Symmar, Kodak Microfile Ektar, Zeiss Apo-Tessar, Leitz Repro-Elmar or Bausch and Lomb Micro-Tessar can be used with ground glass focusing, if mounted specially. Enlarging lenses such as the Kodak Ektar, Schneider Componars, enlarging Raptars and Tessars are all computed for working at close distances. They are especially good for closeups of flat surfaces such as are encountered in copying.

If you plan to do copying only, one lens of good quality may suit all your needs. If, on the other hand, you want to do closeups of flowers, birds or any other subjects which can't be readily arranged but must be photographed as they are, lenses of various focal lengths will assist you in obtaining varied results with different camera-to-subject distances. Let's see how it works.

Which focal length?

On this page are three photographs of small figurines made with an Exakta and extension tubes from a camera-to-subject distance of about 18 inches. The dog was placed 4 inches behind the front figure. The first picture was made with a 28mm lens, the center one with a 50mm and the bottom with a 180mm—all at 1/25 sec. and f/22. Here is what we can learn from these distances. From a given distance,

28 MM

90 MM

180 MM

if we want the subject image small, or wish to include as much surrounding area as possible, a short focal length lens should be used. If we want a larger main image, or wish to exclude surrounding area, a longer focal length lens is needed. Changing the focal length at a given distance thus does not change the relationship between the sizes of the two objects. But it does change the depth of field. A long focal length lens will give you a much shallower depth of field at a given working distance than a shorter lens. See how the dog becomes less sharp as the focal length is increased.

Controlling the background

What happens if we vary subject-to-camera distance? The three pictures on this page were made with the same equipment, lighting and exposure. However, the camera-to-subject distance was varied in order to keep the main figure at a constant image size. The difference in relative size of the two images in each picture is apparent. With a 28mm lens, the dog looks far behind the foreground figure. With a 90mm lens, the distance seems to be less, and with a 180mm lens, there appears to be little if any distance between them. Note, however, that the dog is blurred to the same degree in all three pictures. Despite the change of lenses, the depth of field is the same if the main image size remains constant. What does this mean in practice?

Suppose you were going to photograph a flower in a garden, among other flowers. If you wished to single this flower out from all others, you could come fairly close to the flower and fill your viewfinder. Flowers behind this flower would appear to recede in size into the background. On the other hand if you were planning to photograph a number of flowers at different depths and wished to bunch them together, you would use a long lens (such as the 180mm), and make them seem closer, perhaps in a single plane. In any event, no matter what lens you use, the depth of field between the foreground and background figurines will remain constant *if the main image size on the negative is kept the same in each picture.* In closeup work you can't vary depth of field by changing lenses unless you change the main image size or the diaphragm opening. (For a complete explanation of interchangeable lenses, and what they do, see MODERN, July 1953.)

Choosing the proper equipment and lens is half the battle. You'll find that it takes much patience and practice to achieve satisfactory results with them. For information on exposure, lighting and proper focusing turn to page 40.

CHOOSE YOUR CLOSEUP EQUIPMENT ▶

PICK YOUR 35MM CLOSEUP EQUIPMENT FROM THIS LISTING

Editor's Note: The equipment listed below and on following pages is grouped approximately according to the listings of types on pages 78 and 79. All prices are approximate. For further information, write the manufacturer or distributor listed.

SUPPLEMENTARY LENSES

The following companies distribute closeup supplementary lenses in powers of +1, +2, and +3 and in sizes from Series IV to Series IX. Prices range from 75c to $10.

Eastman Kodak Co., 343 State St. Rochester 4, N. Y.

Ednalite Optical Co., 200 N. Water St., Peekskill, N. Y.

Enteco Industries Inc., 610 Kosciusko St., Brooklyn 21, N. Y.

Gallinger Bros. Inc., 1829 Flatbush Ave., Brooklyn 10, N. Y.

Tiffen Marketing Co., 617-621 Sackett St., Brooklyn 17, N. Y.

Foto-Rule Co., 509 S. Myrtle Ave., Monrovia, Calif.

Mansfield Industries Inc., 1227 Loyola Ave., Chicago 26, Ill.

Spiratone Inc., 32-34 Steinway St., Long Island City 3, N. Y.

The following distributors make supplementary lenses in mounts to fit the lenses and cameras shown, or for the special purpose indicated:

Gaetano A. Buttafarri, 207 Fourth Ave., New York 3, N. Y. Galileo Close-Up Lenses (*Italy*) 1, 2, and 3 For Condor I. $5.50. For Condor II $6.

Enteco Industries Inc., 610 Kosciusko St., Brooklyn 21, N. Y. Plus supplementary lenses in powers of 4, 5, 6, 7, 8, 9 and 10. Prices on application.

Gallinger Bros., 1829 Flatbush Ave., Brooklyn 10, N. Y. Gallinger Clip-On Portrait Lenses 1,2 and 3 sizes 25mm, 29mm, 30mm, 32mm; $1 ea.

Tenplus Co., Warren, Pa., Ten Diopter Lens (+10) Series V or VI; $8 ea.

Shull-Meyer Co., 8681 Melrose Ave., Hollywood 46, Calif. No. 1118 Ser. V, and No. 1119 Ser. VI ($2.80) are specially powered for use with Shull-Meyer Exakta Extension Tube Set to eliminate blind spots.

The following are for use with Shull-Meyer Speed-O-Copy outfits in order to enable focusing at infinity, or to extend focusing range as indicated: For Argus C-2 and C-3 No. 145 -3 auxiliary lens for infinity focus $2.75, No. 146 -2 auxiliary lens to extend focusing range $2.75. For Argus 21 No. 185 -3 auxiliary lens to focus to infinity $2.75, No. 186 -2 auxiliary lens to extend focusing range $2.75. For Clarus No. 192 auxiliary lens for infinity focus $2.50.

Willoughbys, 110 W. 32 St., New York 1, N. Y. Voigtlander Focar Lenses F1 and F2 in slip-on mounts (*Germany*). 29mm $2.50; 32mm $3., 37mm $3.75; 47mm $6.

Carl Zeiss Inc., 485 Fifth Ave., New York 17, N. Y. Zeiss Proxar Lenses (*Germany*). 1 and 2 in slip-on mounts For Contax 42mm and 50mm Tessar lenses, and in screw-in mounts for 50mm Sonnar lenses $5 ea.
For Contessa and Contina. Screw-in mount, $5 ea.

E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. Leitz Front Lenses for Leica (*Germany*). Elmar 50mm f/3.5 lens No. 1 $6; No. 2 $6; No. 3 $8.40.

Closeup Lenses For Bolsey C and CC (*U.S.A.*). Distr. Spiratone, 32-34 Steinway St., Long Island City 3, N. Y. Consist of two positive lenses, one for finder, one for taking lens. Finder supplementary lens incorporates prismatic parallax correction. Available in +2 and +3. Either set $4.95.

FOCAL FRAMES, FIXED

Leitz Auxiliary Reproduction Devices (*Germany*). Distr. E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. For use with Leica Camera and Elmar 50mm lens only. Model BEHOO for reproduction ratios of 1:1.5, 1:2 and 1:3. Consists of 3 extension tubes, lens clamping ring, and set of 4 adjustable marked legs. Legs show correct settings for three reproduction ratios. For Leica with Elmar 50mm f/3.5 $15. Model BOOWU for reproduction ratios of 1:4, 1:6 and 1:9 covering DIN sizes of paper. Consists of 3 intermediate lens adapters and set of 4 adjustable legs. Legs show limits of field covered by lens. For Leica with any 50mm Leica lens $24. Model BELUN for fixed ratio of 1:1, consists of lens collar, 3 legs of fixed length, baseplate with 24x36mm opening for framing subject, attached and extension tube. For Leica with Elmar 50mm f/3.5, $12. Model also available to fit Summitar 50mm lens.

Futura Repro-Stand (*Germany*). Distr. Futura Camera Corp. of America, 34 W. 20 St., New York 11, N. Y. Consists of stand, 3 frames and 3 extension tubes. May also be used handheld. Reproduction scales and field sizes 1:1, 24 x 24 mm; 1:2, 48 x 60 mm; 1:3, 72 x 90 mm. Models available for 45mm or 50mm lenses. Complete outfit $26.50.

Focal Framer (*U. S. A.*) Distr. Speedlight Center, 128 W. 22 St., New York 1, N. Y. Aluminum frame holds supplementary lens. Two legs determine lens to subject distance. Supplementary lens included in price. Model 2 working distance 14 in. $19.95. Model 6 working distance, 6 in. $14.95.

Kodak Retina Close Up Kit (*Germany*). Mfr. Eastman Kodak Co., 343 State St. Rochester 4, N. Y. Consists of 2 frames, a distance gauge, and 3 closeup lenses. For reproduction ratio of 1:2, 1:3 and 1:4.5. For use with Retina cameras with 50mm f/2 Xenon or Heligon lenses. $50. Table top camera stand $24.50 requires camera platform $5.25.

Konica Copy Reducing Attachment (*Japan*). Distr. Konica Camera Co., 76 W. Chelten Ave., Philadelphia 44, Pa. For working distances of 17, 14, and 11 in. Consists of cradle to hold camera, closeup lens, 4 adjustable legs and 3 frames that attach to legs and show field covered at different working distances. For Konica cameras, $22.50.

Reprox 12 (*Germany*). Distr. Spiratone, 32-34 Steinway St., Long Island City 3, N. Y. For all lenses with diameter from about ⅜ to 1¾ in. Actual diameter of supplementary lens ¾ in. Reproduction ratio, 1:2. Consists of plate with closeup lens, 4 legs and lens clamping device $3.95.

REFLEX HOUSINGS

Accura Reflex Housing (*Japan and Germany*). Distr. Photographic Importing and Distributing Corp., 32-34 Steinway St., Long Island City 3, N. Y. Waist-level viewing. Minimum focal length that can be focused at infinity, 90mm in short mount. For Leica, Canon, Kardon, Leotax, Nicca, Tower $39.95. For Contax I, II, III, IIa, IIIa and Nikon $49.95.

Identoscope (*Germany*). Distr. Ercona Camera Corp., 527 Fifth Ave., New York 17, N. Y. Eye-level viewing with roof prism. Provision for vertical shots. Minimum focal length that can be focused on infinity, 90mm in short mount. Models for Contax I, II, III, IIa, IIIa and Leica. $150. Can be fitted to other interchangeable lens cameras. Prices on application.

(*Continued on page 108*)

...with Kodak Medalist Paper

Choose an ordinary paper, and you're stuck with a few rigid contrast grades. Maybe they match your negative—and maybe they don't.

But choose Kodak Medalist Paper, with its unique range of contrast control, and you have a continuous choice of grades, from below No. 1 to above No. 4. *Simply by adjusting the ratio of exposure and development!* Each of Medalist's four numbered grades can be adjusted up or down—softer or more brilliant—to where the adjoining grades take over.

Here, at last, is a modern paper that can be "tuned" to match *any* good negative—match it precisely—for top quality in every print. And you can choose freely between soft, normal, and brilliant prints from the same negative—for the exact mood and interpretation you desire.

Medalist on direct development yields rich, clear warm blacks—just a hint warmer than the true neutral blacks of Kodabromide Paper. In Kodak Brown Toner, Medalist tones to a beautiful warm brown. In Kodak Selenium Toner, it yields rich, deep browns. In Kodak Blue Toner, it acquires gray-blue tones. Several popular surfaces—including glossy F, fine-grained lustre G, and sparkling high-lustre J—and printing grades Nos. 1 through 4.

And it's a high-speed paper—with the same effective printing speed for all four contrast grades.

In brief, it is the most remarkable photographic paper in many years. If you are seeking a finer medium for your work—if you have not yet discovered what Kodak Medalist Paper can do for you—your Kodak dealer is the man to see. See him today.

Kodak

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

The Kodak BULLETIN

BETTER PHOTOGRAPHY...

balancing your photo outfit

BUILD your photo outfit on an orderly plan—and you save both time and money.

In planning your outfit, the major items you'll want first are a good camera, basic picture-taking aids, a good enlarger, and —if you choose a miniature camera—a good projector or viewer for color slides.

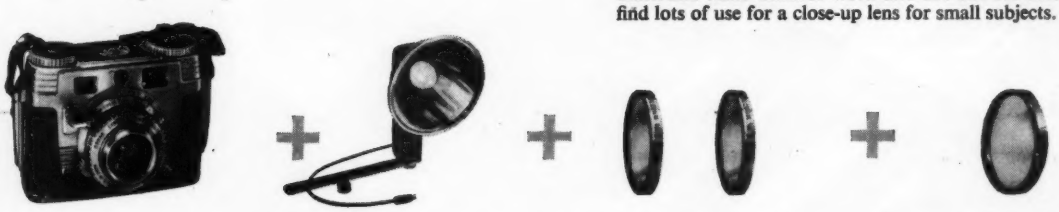
Let's assume that you have a camera. It may not be the camera you'll always keep; but, for the present, it's the center of your picture-taking activities.

A *good* camera is the first step. The best way to proceed from there is to take paper and pencil and outline your plan. You'll find it's fun, and it will keep you from making hasty or impulsive purchases.

If you're a beginner, start with the basic photo aids. Then, as you learn to use what you have, pick up the additional accessories that broaden your hobby. In short, let your equipment grow as you grow in experience and skill. These two pages offer you a helpful guide.

Basic picture-taking aids you'll use most

Certain aids are basic to good picture taking. You don't have to spend a fortune on them, but you ought to get good quality—you'll be using them for many, many years. First, of course, is flash equipment; and we recommend the extra dependability of a B-C flash system. Then, you'll find it handy to have at least two filters, one for black-and-white outdoor work and another for color. And you'll find lots of use for a close-up lens for small subjects.



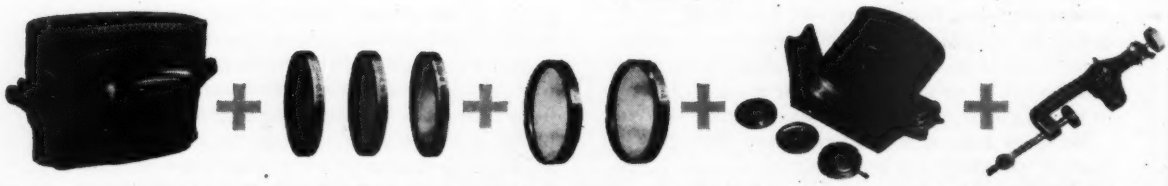
Day or night, flash equipment extends your camera's abilities. The Kodak B-C Flasholder, $10.40, has B-C reliability and will handle two extension lamps. Or you can start with a Kodak Standard Flasholder, $8.25, and add a Kodak B-C Flashpack, $2.95, later. Each Flasholder has an exposure guide on the reflector, always conveniently at hand.

Picture quality is aided by filters. We recommend the Kodak Wratten K2 Filter for most outdoor black-and-white shots and, for color work, a Kodak Skylight Filter to cut down the excessively bluish light of hazy days and open shade. Series IV size, $1.75 each; Series V, $1.95; Series VI, $2.25. Adapter Rings cost from $1.35 to $1.65.

Close-up lenses are essential for exciting short-range shots of people, flowers, pets, documents, or film-filling table tops. Start with the Kodak Portra 3+ Lens. With camera focused at 3½ feet, it lets you work as close as 10 inches. (A table of distances is supplied with the lens.) In Series V, it's $2.95; in Series VI, $3.50. Comes in plastic box.

Other photo aids to add when you can

Now you have your basic photo aids. The next step is to extend your plan to include the additional equipment that will make your picture taking more convenient, increase the capabilities of your camera, improve the quality of your work. You'll want a field case to protect your camera from damage, filters to give you wider choice in variety of effects, two more close-up lenses, a case to protect your filters and close-up lenses, a clamp-type support or tripod. Here again, look for the quality and dependability that mean years of perfect service.



To insure against damage, carry your camera in a case. Kodak Field Cases are smart, made of top-grain leather, and expertly designed to keep your camera always ready for action. For the Kodak Signet 35 Camera, $8.50; for the Retina IIa, $10.50; for the Pony 828, $7; for the Pony 135, $7.25.

Special effects call for special filters. For dramatic dark skies on panchromatic or infrared films, use a red Kodak Wratten A Filter; for medium sky contrast, the deep yellow G. A Kodak Daylight Filter for Kodak Type A Color Films lets you use Type A films in daylight.

Each close-up lens increases your picture-taking possibilities. Complete your set with the Kodak Portra Lenses 1+ and 2+. With your camera focused at 3½ feet, the 1+ brings you to about 20 inches, the 2+ to about 13 inches. Or the lenses can be used in combination.

A handy case for filters and close-up lenses is a convenient, practical way to keep them in top condition. The Kodak Combination Filter Case, of fine, durable leather lined with felt, has pockets for filters, plus space for lens hood and adapter ring. For Series V filters, $4.25; Series VI, $4.95.

Sharp pictures, particularly at slow shutter speeds, depend on a steady camera support. The Kodak Flexiclamp, $4.95, is a handy, adjustable, clamp-type support. It's rugged, easy to carry, easy to attach to almost anything (padded jaws protect furniture). Fits U. S. tripod sockets.

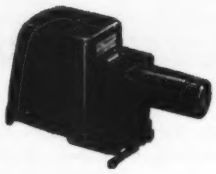
BETTER PHOTOGRAPHY...

selecting your projector...

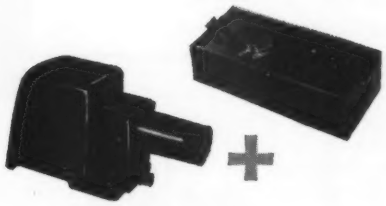
EVERY photographer gives a quick first look at his transparencies before he projects them. But the real excitement comes when you see your best shots blown up life size on the screen. Since this is one of the end results of your hobby, it's important to make sure your projector delivers full value for the price you pay. Kodak projectors do.

Here are some tips on selecting a projector. Consider the size of your screen and the normal distance from the projector to the screen. Make sure the projector will produce a sufficiently bright screen image at that range. Make sure, also, that the screen image is sharp, clear, and evenly illuminated over the entire area. The projector itself should be designed so that slide changing is easy and convenient—without jarring. And the projector should be easy to focus and elevate.

The Kodaslide Projectors and Table Viewers shown on this page meet the requirements and more. Let your Kodak dealer give you a demonstration—it's the proper way to see for yourself whether a projector fits your particular needs.



Moderately priced, the Kodaslide Merit Projector is a great value at $26.10. The *Lumenized* 5-inch Kodak Projection Ektanon Lens, *f*/3.5, and the 150-watt lamp, convection cooled, deliver ample light to your screen for home showings. Images are sharp from corner to corner. Top feed prevents unintentional repeats and jarring.



A step up brings you to the Kodaslide Highlux II Projector, $36.50. A 200-watt lamp, two *Lumenized* condenser lenses and an aluminized reflector throw more light; heat-absorbing glass gives extra slide protection. For $19.20 and $2.59, you can add a Kodaslide Highlux Blower Case and a 300-watt lamp to get added brilliance for larger images.

Daylight viewing calls for a Kodaslide Table Viewer, 4X. Priced at $37.50, it's a combination of projector and screen in a single, compact unit, with easy slide changing and finger-tip focusing. Bright, clear images, magnified four times, are ideal for small-group showings, even in a lighted room or office. Carrying Case, $9.75.

One step up, the Kodaslide Table Viewer, Model A, offers extra performance and style; you'll keep it in view, ready for instant use. Pictures, enlarged about five times, are crisp and sharp. The plunger-type changer accepts 75 cardboard or 30 glass slides, keeps them in order. The price, $97.50; Carrying Case, $27.50, adds convenience.

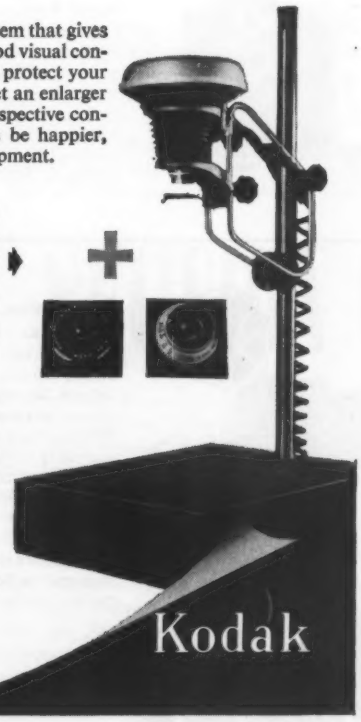
...and your enlarger

The thrill of seeing a choice negative blown up dramatically large . . . the satisfaction of creating enlargements, cropped and composed as you like, with a quality that's yours alone—these are the high points of your hobby.

Here's sound basic advice. Get the best enlarger your budget permits. Choose one that's well built and easy to use. Look for an illumination system that gives you good printing speed and contrast, good visual contrast for focusing, and cool operation to protect your valuable negatives. Budget permitting, get an enlarger that allows for interchange of lenses, perspective control, and accessory uses. You'll always be happier, and do better work, with versatile equipment.

For top-quality work, the Kodak Flurolite Enlarger has every feature you'll need. The integrating-sphere cold-light source gives excellent visual contrast for focusing, excellent printing contrast, and minimizes negative grain. Negative carrier rotates *and* platform tilts for distortion control. Rigid 40-inch column anchored in light-tight all-metal paper-cabinet base. Swift, smooth manipulation. $99.50 without lens. Kodak Enlarging Ektanon Lenses, from $15.00; Kodak Enlarging Ektar Lenses, from $47.50.

For straight enlarging, the Kodak Hobbyist Enlarger, at $57.50, includes one glassless rotating negative carrier, and the Kodak Enlarging Ektanon Lens, *f*/6.3, 89mm., with click stops. Light source is same as on Kodak Flurolite Enlarger. Vertical adjustment is smooth and easy, with positive lock. Provides 1.4 to 7× enlargement on the baseboard.



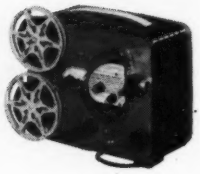
Whether you're a beginner making your basic plan, or an advanced amateur increasing the scope of your activities, visit your Kodak dealer. He is ready to help you select equipment that will meet your needs and respect your budget.

Prices include Federal Tax and are subject to change without notice.

EASTMAN KODAK COMPANY, Rochester 4, N.Y.

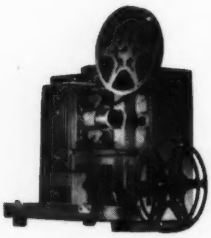
Movie novice ...or expert cinematographer

There's a Kodak Projector exactly right for your needs

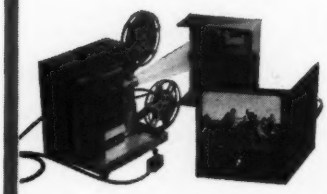


For Thrift. The Brownie Movie Projector offers real movie enjoyment, real projection ability, at a price matched to 8mm. economy. "Floating power" control provides clear, sharp forward projection . . . stills of especially appealing movie scenes . . . reverse-action movies . . . and power rewinding. No belts or reels to shift. Easy threading. Lubricated for life! $62.50

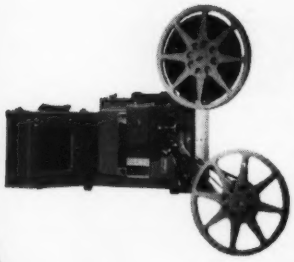
For Extra-Bright 8mm. Movies. Kodascope Eight-71A Projector for long throws, big pictures from 8mm. movies. Has superfast *f*/1.6 lens coupled with 750-watt lamp. For still greater brilliance, a 1000-watt lamp may be used. A quiet, efficient cooling system keeps the heat down, the film safe at all times. Price, with 750-watt lamp and *f*/1.6 lens, $111.80.



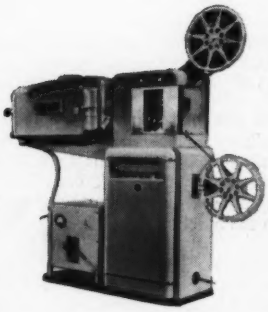
For the Best in 16mm. Silent Projection. Kodascope Royal Projector. Has *f*/1.6 *Lumenized* lens, 750-watt lamp (takes 1000-watt accessory lamp for still greater brilliance). Speed adjustable to variation in line voltage. Reverse-action control. Geared reel arms. Lubricated for life! Hinged-cover compartment holds projection incidentals. $245, complete in case.



For Critical Analysis of 16mm. Film. Kodascope Analyst Projector. Heavy-duty reversing mechanism with remote control for repeated, instantaneous reversals. Constant-speed blower powered by separate motor. Speed control. Lubricated for life! Regular or table-top projection. With self-contained Kodak Daylight Projection Viewer, $295, complete in carrying case.



For 16mm. Sound or Silent Pictures. Kodascope Pageant Sound Projector, Model 1. For home, school, club, or small auditorium. Shows rental sound movies or your personal silent 16mm. films. Permits voice commentary through accessory "mike" or musical background by accessory phono adapter. Lifetime lubrication. All in one carrying case—complete with 1600-ft. reel, speaker, speaker extension cord, spare exciter lamp. $375. Other Pageant models available for specialized audio-visual needs.



For Theater-Quality 16mm. Sound Projection. Eastman 16mm. Projector, Model 25. Steady, high-intensity arc illumination for long throws, big screens. (Also available with tungsten illumination.) Has sealed-in-oil-bath movement which transports films surely, easily, and quietly. Synchronous motors for film movement and sound scanning, and individual motors for blower and reel arms. Kodak Projection *f*/1.5 Ektar Lenses in choice of 5 focal lengths. Prices and details upon request.

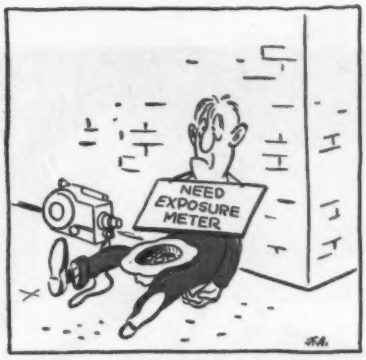
Prices include Federal Tax where applicable and are subject to change without notice.

Kodak

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

Dr. Cinema says...

Confused by the semantics of cameras, projectors? Maybe this will help set you straight.



If this is an era of H-bombs and flying saucers, it is also an era of purple prose in advertising literature. Whatever you go to buy, be it a refrigerator, a power tool, or a piece of movie equipment, you generally need a special glossary in order to interpret the phrases used to describe the merchandise.

In the photographic field, part of this confusion in semantics is understandable. With new products popping up thick and fast, and with older products constantly being changed and improved, it is easier for each manufacturer to coin his own phraseology than it is to get rival manufacturers to identify similar products by a common name.

Let's see if we can translate some of the phrases you are bound to encounter the next time you go shopping for a projector or camera.

Projector semantics

Planetary drive. You won't really need to borrow Junior's space helmet to operate this. Basically, all it means is that the projector is *gear* driven. In this system a toothed wheel revolves around the axis of the wheel with which it meshes, at the same time rotating axially. (Still with me, kids?) But all *you* really need to know is that the projector in question is gear-driven rather than belt driven. It's as simple as that.

Aspheric condenser system. An aspheric lens is simply non-spherical in curvature. This means that toward the edges, the curve is straightened out a bit. In principle, an aspheric lens offers certain light-transmitting advantages over the regular spherical lenses widely employed, producing somewhat better results near the edges. But since making an aspheric lens is a tough manufacturing problem, production versions are usually not ground and polished; instead, they are "fire-polished", which means molded to shape. High quality spherical condensers, on the other hand, are ground and polished with considerable accuracy. Try both types and take your choice—if you can tell the difference. I'm betting you can't!

Single-knob control. This usually means that both lamp and motor are controlled by a single switch. It sounds fine—but you'll probably want to shut the lamp off during re-wind, both to cool the machine and to prolong the lamp life itself. So . . . ?

Re-wind without changing reels. Here is a good idea *if* there's no possibility of reels turning in opposite directions because you forgot to flick a lever or something. Check this angle carefully, or you may spend extra time splicing broken film in the future!

Automatic threading. Well, maybe that's stretching it a little, but the fact is that some projectors really are easier to thread than others. Try it before you buy it! There is one unit on the market that I consider appreciably harder to thread than any of the others. Don't ask me which one it is—you'll recognize it the first time you tangle thumbs on it. Although there are many more phrases in connection with projectors that could stand some translation, space dictates that we take a rain-check on them for the time being. . . .

Movie camera semantics

Zoom viewfinder. Actually this should refer only to the finder with a zoom lens. It should not be applied to the *variable* finder which is adjusted to match lenses of different focal lengths. A true zoom finder changes fields automatically, a variable finder does not—it has to be adjusted according to the lens in use.

Octameter. Sounds impressive, doesn't it? In plain terms, it's a compact, *variable* viewfinder which can be manually adjusted to match the fields of eight different lenses, from wide-angle to telephoto. You can't blame the manufacturer for coining a short, attention-getting name like this—and at least no spurious claim is made. It's like such names as Hydra-Matic, Dacron, Viyella, and Powerbilt. Any one of these would take quite a few words to put into pedestrian English, and you wouldn't like them nearly as well.

Optical viewfinder. This is a viewfinder which has a lens in it— and what movie camera doesn't? The real point is whether or not the optical finder is a *positive* finder. If it is, the field of view remains stationary no matter how the eye is moved at the eyepiece. Furthermore, the field of view will exactly match that of the camera lens used. It's been my experience that they say "optical" only when they can't say "positive."

Constant-speed motor. While a synchronous electric motor comes the closest to being actually constant in speed, the spring motor of any reputable camera should run—and will run—at what you and I think of as a constant speed. So why do some copy writers use this phrase in describing a specific camera when the same thing can be taken for granted about any reputable camera—and isn't *literally* accurate anyhow?

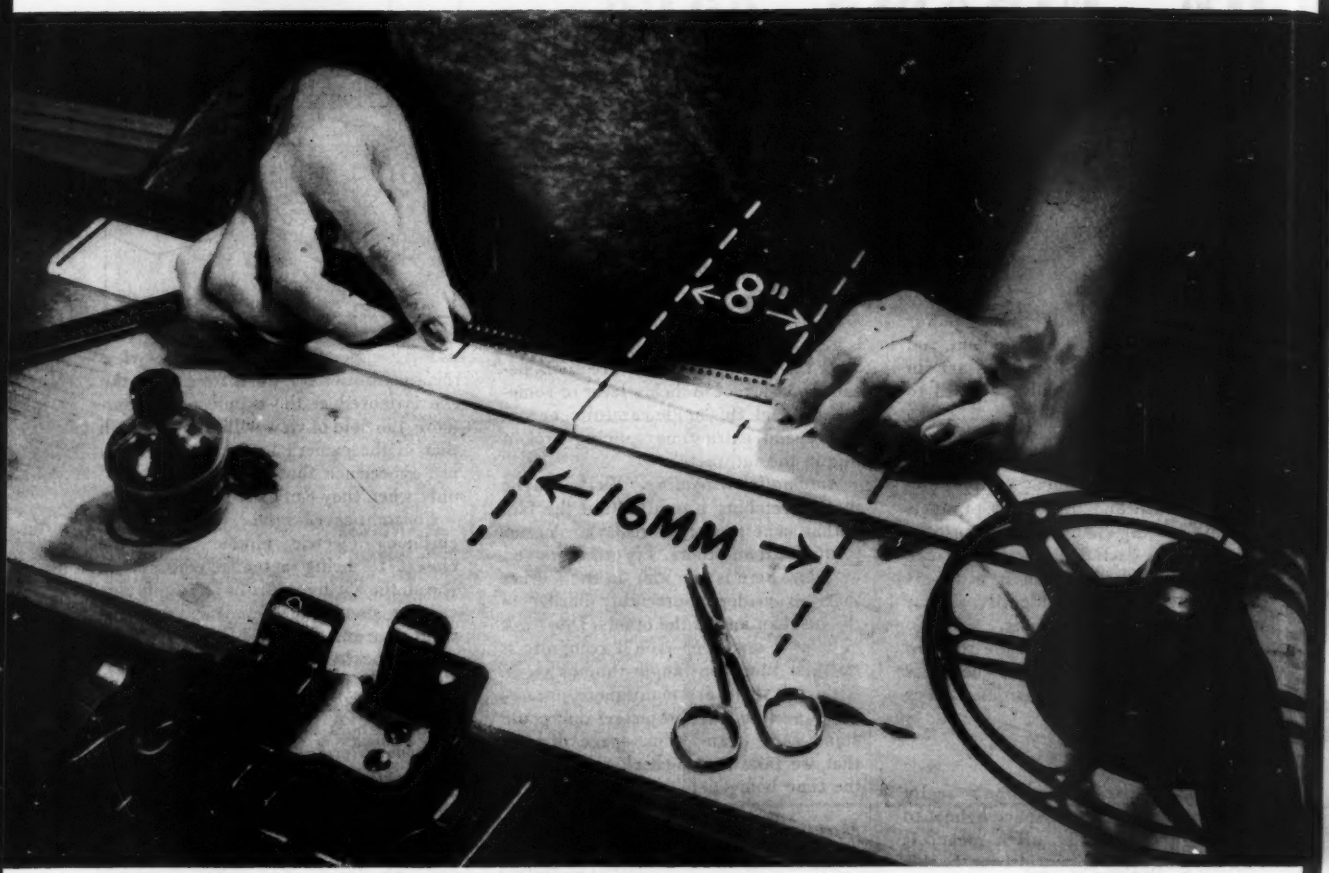
Foolproof. Now there's an application of truth-stretching that I *really* object to. There never has been a foolproof camera, and there never will be. Thank heavens, you see very few adjectives of this kind in the photographic field!

Two more phrases, however, come to mind which, in my opinion, need a radical haircut. These are: "Simple, drop-in loading", and "Simply drop in the magazine and shoot." With most movie cameras nowadays, loading *is* easy, but they all have to be threaded in some manner. Anyone who bought a camera on the face value of these statements would doubt all sales copy from then on!

Don't forget that I'll be glad to help you with movie-making problems whenever I can. Just write me in care of MODERN, and enclose a self-addressed, stamped envelope for your reply. —THE END

A free booklet, "Tips On Making Your Own Magnetic Sound Movies," is available upon request. Simply drop a postcard to: The Movie Editor, MODERN PHOTOGRAPHY, *251 4th Ave., N. Y.*

MOVIE SECTION ▶



Each space between marks represents 1 second projection time (16 frames) for 8mm and 16mm films respectively.

Edit by a Yardstick

BY ERNST WILDI

All *good* amateur movies have one thing in common—they have what it takes to keep the attention of a viewer riveted to the screen. When a well-exposed movie containing lively subject matter fails to do this, the fault can usually be traced to scenes which "drag" or otherwise slow down the tempo of the film. The remedy, of course, lies in cutting each scene to exactly its proper projection length.

What *is* the proper length for a movie scene? That depends upon the nature of the scene, or the action taking place. Obviously a straight scenic does not deserve as many seconds of projection time as a shot of a fireman swaying on a ladder. Each scene must be judged

A piece of film consisting of 16 frames will serve as a guide in calibrating a measuring stick made of wood or cardboard. I use both 8mm and 16mm film; hence the spaces between the wide marks will be used to measure 1 sec. intervals of 16mm film. Short spaces measure 1 sec. intervals of 8mm.

and cut accordingly—the trick being to let each scene run just long enough for a viewer to grasp the situation fully, then cutting to a new scene before his interest has a chance to wander.

There are a number of ways to go about cutting your scenes to proper length. This is the way I do it: First, I jot down a list of all the different scenes which appear in a reel of film. Two or three words such as "Baby eating," "Pup fetches the slippers," etc., are sufficient. Space is left beside each scene title for comments, then the film is threaded in the projector and run off at normal speed. As each scene flashes on the screen, I either start counting in seconds or time it with a stop watch. The instant I have seen all the details and feel my interest begin to lag, I stop the projector. The time (in seconds) it took to run the interesting part of the scene is the time I want it to appear on the screen after it has been cut. Beside the identifying title of the scene, I make a note of the time I've decided to give it—and add any comments that may help later in cutting or rearranging the scene for the sake of continuity.

Each scene is given this kind of attention; then comes the actual cutting. An editing viewer will facilitate the cutting work, but if necessary you can do without it. The key to my system is a piece of wood or cardboard (a yardstick painted white is ideal), several feet long. At regular intervals along the yardstick are black lines ruled in India ink. *Each space* between the lines represents a unit of 16 frames of film—the equivalent of 1 second of projection time. Since I use both 8mm and 16mm film, my yardstick contains two sets of markings. Each long space (between the wide marks) is equal to 16 frames of 16mm film which will project for 1 second; each of the shorter spaces on the stick measures off 1 second (16 frames) of 8mm film. Rule off as many marker spaces as you think you'll need—remembering that a scene worth more than 20 seconds or so of screen projection time is a rarity.

After a reel of film has received its first cutting, I project it again—and repeat the process until the cutting of individual scenes is completely satisfactory. Then, wherever necessary, I transpose scenes so that the action has better continuity, or so that long shots alternate with closeups to improve the over-all tempo.

As I mentioned before, there is no arbitrary rule that can be used to ascertain proper scene length. The more action there is in a scene, or the more details it includes, the longer the scene should run. The following suggestions may help serve as *general guides* in cutting.

Suggested running time for average scenes

6 Seconds: Scenic views with action; waterfalls; landscapes with foreground objects; beach scenes; street scenes; groups of adults or children; streets at night.

4 Seconds: Long shots of statues, buildings, bridges; scenic shots without foreground interest; two persons; med. shot person and animal; streets with little traffic.

3 Seconds: Closeups of trees, flowers, babies, animals, children, pets, hands, feet; med. shots without action.

As Long As Interesting: Parades, sports scenes, stageshows, unusual kinds of work; fireworks.—THE END

A scene with many details usually deserves about 6 sec.

A closeup of this type is seldom worth more than 3 sec.

A sign should be projected long enough to read it twice.

Project an action scene for as long as it holds interest.

he drew a natural!

In his latest picture, Jack Lemmon portrays a semi-pro movie-maker; in real life, he's an 8mm hobbyist.

It Should Happen To You is th title Columbia Pictures Corporation has given its latest film starring Judy Holliday. Actually, the kind of luck Jack Lemmon had in landing the male lead in this film should happen to any young actor!

Not only does Jack meet, woo, and win Judy—but he also films her at great length while playing the part of a semi-pro photographer trying to produce a documentary film. Moreover, he manages to handle the gadgets on a Bell & Howell 70-DL camera realistically while going through the familiar contortions of a movie-maker. The reason: he's only doing what comes naturally. The thing Columbia Pictures didn't know when they signed Jack for the picture was that in private life he is an ardent home movie-maker!

Jack got his start as an amateur hobbyist several years ago when someone gave him an 8mm Keystone camera. While on vacation with his actress wife Cynthia Stone, he shot several rolls of black-and-white film, then tried his luck with a roll of color. The first films turned out so well that he decided to make amateur movie-making one of his principal hobbies. A Keystone K-68 projector, a Weston Cine exposure meter, a beaded screen, a splicer, and a few filters now constitute the entire inventory of his equipment. Most of his films are strictly documentray by nature—shots of his wife and their wire-haired terrier "Duffy," relatives, associates on the movie sets, and a couple of thousand feet of straight scenics. "Since I'm strictly an amateur at this sort of thing," Jack says, "it was a lot easier for me to 'live' my part in the picture with Judy than if I had been trying to 'act' like an amateur. As a matter of fact, you might say it made the camera handling scenes a cinch."

Before beginning work on *It Should Happen To You,*

Hassle in the park between Judy Holliday and fellow citizen is fair game for Jack Lemmon's documentary camera in a scene from *It Should Happen To You.* Jack practiced on the 70-DL camera for days, handled it realistically.

by GEORGE BOARDMAN

Monkey's-eye view of the zoo crowd was recorded by Lemmon who, as a documentary movie-maker in the film, took his work with intense seriousness.

In another scene (shot in New York's Central Park Zoo), Lemmon was swung about on a tire usually reserved for simian set, nearly dropped camera!

Jack borrowed the 70-DL that would be used in the picture, and wandered around New York shooting everything that caught his eye. By the time the studio cameras were ready to start rolling in Central Park, he was handling the 70-DL like a veteran.

While enacting the scenes in which he was supposed to be photographing Judy, Jack framed her in the viewfinder, adjusted and focused the lenses, and otherwise used the camera exactly as if it had been loaded. "One thing I learned from the shooting script that I can use in home movie-making," he says, "was to change my camera angles and camera-to-subject distance *often*."

Now that he has begun to edit his own movies, Jack plans to begin titling them. Eventually, he'd like to graduate to a 16mm sound outfit. But although he and Cynthia have set up a corporation to produce television shows, they don't plan to mix their acting and producing abilities with their hobby. "Home movies are about the most relaxing pastime I can think of," Jack says. "But when you start mixing your profession with your hobby, it could easily turn from a pastime into a labor. I'll stick to being a dyed-in-the-wool amateur!"—THE END

A free booklet, "Tips On Making Your Own Magnetic Sound Movies," is available upon request. Print your name and address on a postcard, mention the booklet and mail to: Movie Editor, MODERN PHOTOGRAPHY.—*Ed.*

At home with actress wife Cynthia, and "Duffy," Lemmon shoots family-type movies with 8mm outfit.

Photographic Optics

by A. R. Greenleaf

"Exceedingly Helpful". —PSA Jl.

"Unusually Accurate". — R. Kingslake, Eastman Kodak Co., in Jl. of the Optical Society.

"Intensely practical . . . explodes myths that have long been substituted for facts . . . the first book we have seen with the temerity to bring into the open the actual performance of the average astigmat in use today . . . The chapter on choosing and testing a lense is worth more than the price of the book. The classification of 200 modern lenses enables one to tell at a glance the characteristics of any given lens and know for what work it is best adapted." —Am. Photography

Movies for TV

The growing demand for GOOD 16mm movies for TV offers you a new and profitable market. In this book *John Battison*, an experienced TV program director, explains in detail the special requirements for movies suitable for televising and gives explicit directions for titles, editing and splicing, lighting, wipes, fades, and dissolves and the other techniques of good movie making.

Film and the Director

Don Livingston, who has directed more than 60 movies, gives all the practical details you need to know in order to produce the best money the most economically. Here is expert advice on continuity techniques, casting, editing, use of equipment and hundreds of other details.

SEE THEM ON APPROVAL

Use this coupon

Watch for

Make Your Own Stereo Pictures

by Louis Kaiser

a practical how-to-do-it book

The Macmillan Co., 60 Fifth Ave., New York 11

Please send me the books I have checked. I will either remit the full price plus small delivery charge or return them in 10 days. (*Save:* Send check or money order and we pay delivery charge).

☐ Photographic Optics $6 ☐ Movies for TV $5
☐ Film and the Director $5. (prob.)

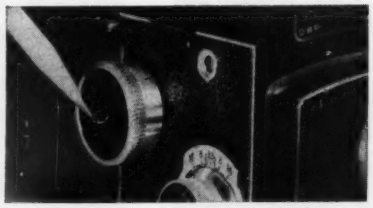
Signed_____

Address_____

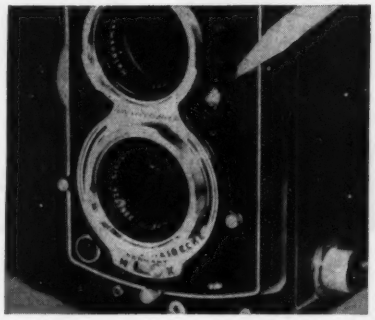
(This offer good only within continental limits of U.S.A.)

NEW ROLLEICORD NOW AVAILABLE

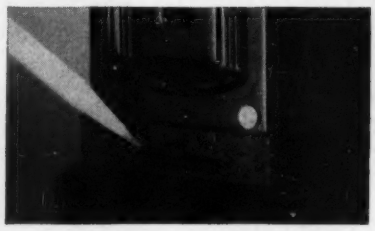
The new Rolleicord IV features seven improvements over the now discontinued Rolleicord III. The price, however, remains the same, $149.50 with case and lens caps. The new model can easily be distinguished from the old by the lack of push-in button on film advance knob.



1. Film transport knob has no release button. Knob can be wound only after an exposure has been completed.



2. Button between lenses governs double exposure prevention device. 3. M-X synchronization switch on camera front.



4. Rolleigrid release holds down accessory field lens. 5. Nearby button holds down hood panel for the sportsfinder.

6. Baffled interior prevents internal reflections. 7. Tripod base, not shown, will accept a new type tripod adapter.

HERE'S A WONDERFUL "LAST-MINUTE" GIFT

NEGA-FILE NO. 20

for 2¼ x 3¼ Prints and Negatives

Chest is made of solid, seasoned, beautifully finished hardwood stock, equipped with brass-plated hardware. It protects contents from dirt, dust and temperature changes . . . permits fast, easy filing and finding of any particular negative or print. Chest with 600 Printed Glassine Envelopes, Index and Guides printed from 10-600, only $7.15; with 600 open-end transparent sleeves, only $12.65. Printed Envelopes, side seam, per hundred $.75; Plain Envelopes, side seam, per hundred $.50; Transparent Sleeves, side seam, per hundred $1.80. If your dealer cannot supply you, order direct and ask for free catalog and filing handbook.

THE NEGA-FILE COMPANY
EASTON 11, PA.

FOR THE BEST "BUY" OR TRADE
see or write **Bass**
QUALITY CAMERAS SINCE 1910
Bass CAMERA CO.
179 W. MADISON ST., CHICAGO 2, ILL.

THE PROFESSIONAL FINISH
EXCLUSIVE FINE GRAIN
35 MM & ROLL FILMS
Free Price List & Mailers
AMATEUR FOTOGRAPHIC SERVICES INC.
126 W. 46 St., New York 36, N. Y. Dept. M

McGREGOR *high fidelity* COLOR FILM

20 exp. **$2.79**

36 exp. **$3.95**

WONDERFUL COLOR AT REASONABLE COST!

Ask Your Dealer

McGregor Products Company
16 State St., Rochester 14, N. Y.

Only $79.95

—yet it challenges the "giants"!

A magnificent new 35mm. camera with the *speed*, the *versatility* and the *stamina* of the so-called "giants" is now yours at a midget price. The Iloca craftsmen of Hamburg, Germany call it their finest achievement.

From the moment you pick up the Quick "B" you sense its greatness. The machining of each part is precise. The workmanship obviously superior. You note that in a single glance you can check shutter speeds, diaphragm settings and depth of field scales—all clearly visible from the top.

Next, bring the camera to your eye-level and see how the coupled range finder has been combined with the viewfinder in a *single window*. You focus, sight and shoot in a split second. Observe how smoothly the worm gears mesh in the true helical mount. How the entire lens moves forward and back at fingertip pressure.

Looking further, note that the shutter winds *automatically* as you wind the film. This feature prevents double exposure, but you will also find an unlocking device that permits double exposures *if you so desire!*

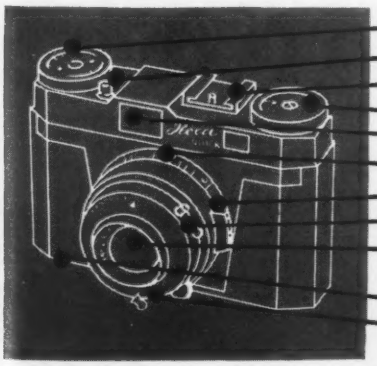
Examine carefully the very *famous* and *accurate* Prontor SV shutter with its *nine speeds* from 1 full second to 1/300th, its full M-X synchronization that broadens your flash horizons to *every* speed. And now a wonderful feature—the *built-in self-timer* that invites you into your own pictures. And because the lens is all important—here is the coated, color-corrected and razor-sharp Ilitar F/2.9—fast enough for *action* color shots—sharp enough to satisfy your most critical black and white requirements, amateur or professional.

the new ILOCA® QUICK "B" 35mm.

Now open the camera. One quick flip of the rewind knob pops off the entire back! Very neat. Inside you'll find a *sprocketless* take-up spool that ends ripped film forever. The world's easiest loading!

Finally—the *all-metal construction* (the true craftsman scorns brittle plastic), and the handsome satin-chrome facing contrasted against black leather. A beauty!

Is it any wonder we say that here is the world's greatest 35mm. camera value? Go to your dealer today and take the Quick "B" in your hands. See for yourself!

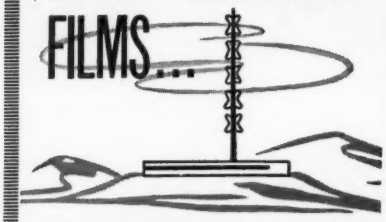


1. Automatic exposure counter · Automatic shutter wind
2. Body shutter release
3. Accessory shoe
4. Film "reminder" dial and rewind knob
5. Coupled rangefinder · Single window viewing and focusing
6. Depth of field scale · All controls visible from top
7. Worm geared helical focusing mount
8. Prontor SV shutter · Speeds 1 second to 1/300th. Full M-X synchronization
9. Ilitar F/2.9 lens, coated, color-corrected
   Made by Optische Werke, Gottingen, of famed Schneider Works
10. Provision for double exposures · Guard against lost exposures
11. Delayed action self-timer.

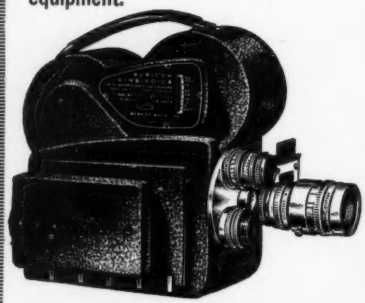
We have an interesting booklet on the Iloca Quick "B". Write for it today. *It's free.*

ERCONA CAMERA CORP. Dept. B-1 • 527 Fifth Ave. • New York 17, N. Y.

SHOOT TELEVISION FILMS...



...for your local TV Station. Make Extra Profits with the Auricon **"Cine-Voice"** 16mm Sound-On-Film Camera. Auricon High-Fidelity "Talking Pictures" run on any 16mm sound projector...or on Television Station film-broadcast equipment.



Auricon "Cine-Voice" Camera
For 16mm Sound-On-Film Talking Pictures. $695.00 (and up) with a 30-day money-back guarantee.

AURICON
BERNDT-BACH, INC.
7389 Beverly Blvd., Los Angeles 36, Calif.

MANUFACTURERS OF SOUND-ON-FILM RECORDING EQUIPMENT SINCE 1931

Auricon Hollywood

Please send me free "Cine-Voice" information.

NAME.....

(Please write your address in margin) 89CG

GEORGE EASTMAN

(*Continued from page 65*)

were brittle, others not strong enough to stand wear and tear. Finally, in 1889 Reichenbach came to Eastman with the answer: nitro-cellulose could be dissolved in wood alcohol and camphor. This would provide a suitable transparent material for roll film.

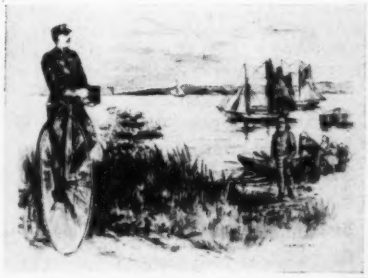
Now Kodak cameras returned to Rochester were reloaded with the new transparent film. To produce it, long glass-topped tables (200 feet long in 1891) were set up in the factory. First they were covered with nitro-cellulose solution called dope. When this dried, a coating of silicate of soda was applied so the emulsion would adhere.

Orders poured in. Among them was one from Thomas Edison, who found in transparent film the material he needed for his primitive motion-picture machine, the Kinetoscope.

Meanwhile, Eastman continued to simplify his process further by buying patents, patent rights, then even entire firms. These were incorporated into Eastman's company. Daylight loading of film became practical with the Pocket Kodak of 1895, enabling the user to load his own film without a darkroom—process it himself or have it done by a photofinisher. There was also the familiar paper backing which protects film and is numbered so exposures can be read through a camera window. With the Folding Pocket Kodak simple cameras were made collapsible. And the $1 Brownie of 1900, intended for children, brought the price of photography within the reach of almost everyone.

Not just a fad

From the *Chicago Tribune* in the 1890's came word that "The craze is



Camera in cyclist's hands was part of an early Kodak ad showing ease with which pictures could be made by anyone.

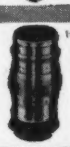
spreading fearfully. . . . Chicago has had many fads whose careers have been brilliant but brief. But when amateur photography came, it came to stay." Kodak jokes were told. Gilbert and Sullivan even wrote a verse about the new

(*Continued on page 96*)

The Discriminating Owner of a Leica or Canon
chooses his accessories wisely

135mm f:3.8 TELECOLINAR
the sharpest telephoto lens of its kind. Coated, rangefinder-coupled, in lightweight satinfinish mount. **$66.95**

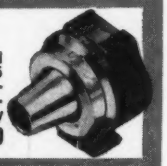
90mm f:4 SUN
an elegant telephoto lens for portraits and moderate distance work. Coated, rangefinder-coupled, in leather-trimmed light-weight mount. **$59.95**



ACCURA REFLEX HOUSING
permits parallax-free closeup and telephoto work, like with a single lens reflex camera. Composing, focusing on groundglass, aided by adjustable magnifier. One motion snaps mirror up and releases shutter. **$39.95**

135mm f:3.8 SUN for REFLEX HOUSING
a coated telephoto lens which permits a complete range from 5½ feet to infinity, made in a special short focusing mount for use with the Accura Reflex Housing. Lightweight satinfinish mount has depth of field scale engraved. **$49.95**

UNIVERSAL FINDER
shows erect image of all lenses from 35mm to 135 mm, with clickstop positioning. Has parallax correction and fits accessory clip. Complete with leather case. **$35.50**



UNIVERSAL ZOOM FINDER
shows actual magnification and reduction of subject in accordance with focus setting used. From 28mm to 135mm. Complete with leather case. **$29.95**

TELEPHOTO and WIDEANGLE FINDERS
are economical when required for only one extra lens. Chrome finish, with parallax correction. Available for 75mm, 85mm, 90 mm, 100mm, and 135mm, with leather case. Each **$8.95**

35mm Wideangle Finder, with leather case $9.95

BELLOWSCOPE, BELLOWSCOPE Jr. and FOCUSING EXTENSION TUBE—Now All Available for Leica and Canon at same, low prices.

PHOTOGRAPHIC IMPORTING AND DISTRIBUTING CORP.
P. O. Box 117, Bowling Green Sta., N. Y. 4, N. Y.

Da-Lite

Proudly presents

the NEW

SILVER KING*

THE BEST PROJECTION SCREEN YOU CAN BUY FOR "STEREO-COLOR" REPRODUCTION

IDEAL FOR 2-D PROJECTION TOO!

*Trade Mark

CHECK THESE FEATURES ALL DA-LITE ORIGINALS!

- **"PUSH-BUTTON" OPENING**
  . . . Touch the "Push-Button" . . . extension rod pops up . . . legs glide open.
- **SLAT-BAR**
  . . . For uniform tension . . . wrinkle-free surface.
- **ROLLER-LOCK**
  . . . A slight turn stretches fabric taut.
- **AUTOMATIC TENSION RELEASE**
  . . . prevents fabric damage.

BIG 40x40" SILVER KING SCREEN $31.95

GIANT 50x50" SIZE ONLY . . $39.95

Other Da-Lite projection screens priced from $3.50

TRULY THE FINEST, EASIEST OPERATING SILVER SCREEN

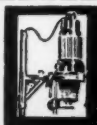
Ask your Dealer for a demonstration on this DA-LITE SCREEN and free booklet or write

DA-LITE®

PERFECTION IN PROJECTION Since 1909!

DA-LITE SCREEN CO., INC. 2711-23 N. Pulaski Road Chicago 39, Illinois

SPECIAL!
40mm f3.5
WIDE ANGLE LENS for KINE EXAKTA
A product of one of Japan's finest optical plants. Perfect pictures . . . coated, color corrected. Brand new.
List 54.95 **SPECIAL $29.95**
(Deluxe leather case $3.50)



Save on New FOTOLARGERS
For negatives to 2¼ x 3¼

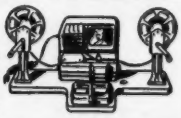
	Model D Diffusion	Model C Double Condensers
Less lens	20.95	26.20
With 3½" f6.9	24.45	29.70
With 3½" f4.5 Ektanar	33.75	39.00
Extra negative carrier, each		2.80
Counterbalance		3.95
Condensers alone		5.99
For negatives to 4 x 5		
Less lens	38.15	54.25
With 5¼" f4.5	61.25	77.35
Extra negative carrier, each		4.39
Counterbalance		4.29

4-LITE MOVIE LITE
List $24.95
Special $18.75
Famous brand. Folds outward without removing bulbs. Complete with camera platform, tripod socket and support handle. Handsome tweed carrying case. Holds unit with bulbs intact. Also holds camera and film.
COMPLETE WITH 4 375 WATT LAMPS

35mm BULK FILM SALE
Another Fotoshop scoop! Fresh, dated 35mm bulk film, spooled and canned for us at a huge saving . . . AND WE PASS THE SAVING ON TO YOU. Respooled from fresh government stocks and available in your choice of: EASTMAN PLUS X, EASTMAN SUPER XX, ANSCO SUPREME. All guaranteed fresh and perfect.
Reg. $6.00 SPECIAL 100 ft. roll **$4.00**
2 rolls for **$7.50**

200 WATT SLIDE PROJECTOR OUTFIT
*VU-AID BC-1 SLIDE PROJECTOR —200 watt. Blower cooled. With handsome tweed case List 29.95
*40x40 FOTOSCREEN List 19.95
Only **$35.25** Total Value 49.90

MANSFIELD ACTION EDITORS



- All metal die-cast viewer
- Viewing screen 2¼" x3¼"

8mm complete $29.95
16mm complete $32.95

BALDINETTE 35mm Outfit

- BALDINETTE I Camera—Coated f3.5 lens. Speeds to 1/200 sec. Self-timer, body release, double exposure prevention.
- Leather eveready case.
- Flash gun

List $55.65
Only **$44.45** (complete)

NEW 1954 CATALOG
Send 5¢ in coin or stamps
20% Deposit on C.O.D.'s
Please add approximate postage.
All items subject to prior sale.

"the house of personal service"
fotoshop inc.
136 WEST 32nd STREET
New York 1, N. Y. LO. 3-1973

GEORGE EASTMAN

(*Continued from page 94*)

Kodak camera for their opera *Utopia, Limited*. And at an early date the new camera appealed to reporters. Not only was it used for taking news pictures but a Washington correspondent sent his chain of papers a special column about political life in the capital called *Caught With A Kodak*. In Britain, Prince George and Princess Mary (later King George V and Queen Mary), as well as many others prominent in Europe, placed orders for complete Kodak camera outfits.

Who was the new amateur?

There were now two classes of photographers besides professionals. Back in 1892, Eastman put his finger on the different groups when he said, "The first are the true amateurs, who . . . acquire skill in developing, printing, toning, &c., and their number is limited to those who have time to devote to it, inclination for experimenting, and such facilities as the dark-room, &c., required in practicing the art.

"The second class are those who, lacking some, or all, of the requisites of the 'true amateur,' desire personal pictures, or memoranda of their every-day life, objects, places, or people that interest them in travel &c." Ten snapshooters for every true amateur was the ratio he set at that time.

Eastman introduced many new products for the larger group. Among these was a variety of simple cameras; also, the Autographic cameras of 1914 to 1933, which enabled the user to write his own titles on the roll of film. A metal stylus was provided, and the camera had a covered slot in the back long enough for writing a brief line of text.

The daylight developing tank marketed in 1902 appealed to photographers who wanted to do their own processing. For all amateurs there was Eastman's new N.C. (non-curling) Film of 1903. And safety film which appeared before World War I made photography less inflammable for camera owners everywhere.

Business boomed—and boomed

The growing demand for cameras, film and paper was reflected by changes in the Eastman company. The young dry plate business which started in 1880 with less than $10,000 was incorporated nine years later with $1,000,000 capital. Twenty-one years after its founding the firm had a substantial $35,000,000 worth of common and preferred stock.

There had been an Eastman plant in England since 1889. Now branches were formed elsewhere in Europe, as well as in the Far East. Business at the turn of the century centered around film and camera manufacture, with sales of paper running a close second. Soon retail Kodak stores were established in large cities. Drugstores obtained concessions to sell film. As time went on, however,

The Eastman factory in 1891, only two years after the No. 1 Kodak appeared.

motion-picture film began to form a greater part of income. In 1910, Eastman's firm turned out 185 million feet of movie film. By 1911, Kodak did a large percentage of all photographic business in the United States.

What remained now?

In less than 25 years, Eastman had made photography available to everyone. Three things, however, which we count as important today, were lacking in U. S. manufacture: panchromatic film (sensitive to all light, including red), easy-to-use color film with good tone rendition, and a simple camera for home movies.

The story of the first two are tied up with the work of Dr. C. E. Kenneth Mees whom Eastman hired to head his research laboratory in 1912, under rather extraordinary circumstances. On one of his frequent business trips to Europe, Eastman found a man he needed, and wrote a description of Mees: "a chemist, a physicist, a practical manufacturer of color sensitive dry plates and of color screens [filters] . . . and one of the best known authorities on color photography. On approaching him," Eastman continued, "he informed me that he would be willing to come to Rochester, but only on condition that we purchased the capital stock of his company [Wratten & Wainwright]. As his concern was a small affair, I told him that would be no obstacle." Wratten & Wainwright was then doing about $60,000 worth of business annually, and made panchromatic plates. The emulsions used were sensitive to red light, in addition to the blue and green radiation which other plates had recorded before.

German scientists had discovered that panchromatic sensitivity could be ob-

(*Continued on page 98*)

"It's a Bell & Howell!"

There is no finer gift choice in movie-making equipment than a camera or projector made by Bell & Howell. Here you see the famous 16mm magazine-loading 200 movie camera at $174.95. Other models in the line range from as little as $49.95 for the Two Twenty . . . to the supreme choice of them all, the 70-DL. Remember, the gift that will give a lifetime of pleasure is a Bell & Howell.

Clip and mail the coupon for full information today!

There's a movie camera and projector for every purse and purpose from

Bell & Howell

MAIL TODAY! SOLVE YOUR GIFT PROBLEMS!

Bell & Howell Company
7154 McCormick Road
Chicago 45, Illinois

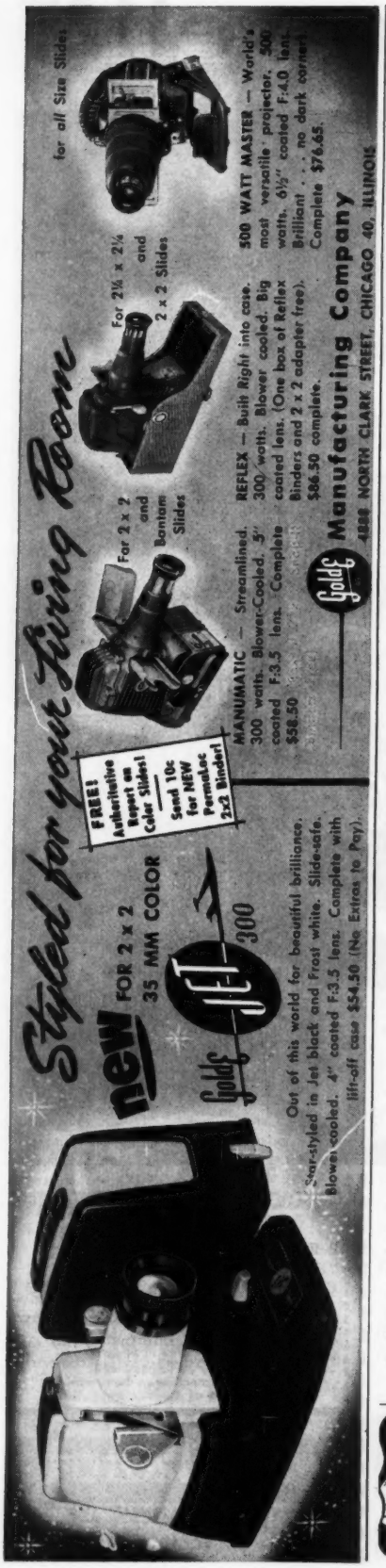
Please send me, without cost or obligation, complete gift information on . . .
☐ Cameras ☐ Projectors ☐ Accessories

NAME.....

ADDRESS.....

CITY.....

ZONE.....STATE.....



GEORGE EASTMAN

(*Continued from page 96*)

tained if sensitized plates were bathed in certain dyes. Later these dyes were incorporated into the emulsion itself. While amateur film (sensitive to only blue and green) caused anything red to register as black, European-made panchromatic plates showed red as a shade of gray. And the best plates came from Mees's firm.

Mees comes to Rochester

The new techniques were transported, too. A year later in 1913, panchromatic plates and motion-picture film appeared under the Kodak label. Production of a Kodak panchromatic roll film for amateurs was delayed till 1933. The reasons? Demand was small, and the new type of film was more difficult to handle in the darkroom than film which could be developed by red light.

Talk of plates may seem strange when casual shooters everywhere had adopted roll film. Yet a kind of snobbery existed before World War I. Professionals considered roll film "good enough for the amateur." But no film, they felt, could stay flat over the large picture-taking surface they needed. To meet their demand, Eastman continued making plates along with film. In 1913, however, he presented professionals with Eastman Portrait Film. This was a sheet film equal in every respect to glass plates. The base was of thicker material than for rolls, so it would stay flat in the camera. And the belated conversion of professionals to sheet film began.

What about color?

When Mees came to Rochester, he also brought his knowledge of color work. The principles had been known since the earliest days. Pictures had been made. But the methods which gave good results were difficult and expensive. Writing in 1911 Eastman commented, "the color processes of Lumière and [Ducos] Du Hauron are the furthest advanced, up to this present date . . . and both are capable of producing results which . . . are practically perfect. They are both delicate processes to work from a manufacturing point of view, however. As far as the production of a material suited to the use of ordinary hand camera users they are totally inadequate." But, he added, "The problem is narrowed down

BE A NEGATIVE RETOUCHER
MAKE BIG MONEY! UP TO $5 AN HOUR SPARE OR FULL TIME
● Amazing new proven visual instruction by foremost Hollywood photographic authority, quickly and easily prepares you to do finest professional negative retouching at home. We supply all equipment needed—step by step directions for building big profit business from photo studios everywhere. No special ability or experience needed. Men and women of all ages can make tremendous profits. THOUSANDS OF SATISFIED STUDENTS.
SEND FOR FREE BOOKLET TODAY
THE DUVAL SCHOOL 6051½ SUNSET BLVD. Dept. 107 HOLLYWOOD 28, CALIF.

IT'S TERRIFIC!
THE NEW HOLLYWOOD PROJECTOR TABLE

$26.95
Wired for action!
Look at these conveniences—Illuminated view window for viewing and identifying slides. Electrical outlets for movie or slide projector and household light. Control switch automatically turns out lights when projector is on and lights on with projector off. 15 ft. permanently attached cord. Roomy 19" x 25" beautifully finished top may be set level or tilted. Chrome legs fold for compact storing. Glow light illuminates floor area.
See your dealer for addl. information or write:
STAINLESS STEEL PRODUCTS, INC.
Box 3068 Burbank, California

Unusual Color Titles
Put ZIP into your shows. Delight your friends with a humorous "professional" touch. For real showmanship, introduce these titles at the right time and wait for the raves. Different—cleverly designed 2 x 2 color slide titles—using pretty Hollywood models. ACT NOW—Set of 4-$1.50. Free Catalog and sample slide title—Send 25c to cover mailing.
HOLLYWOOD SPECIALTY PRODUCTS
6253 Hollywood Blvd., Suite 1028
Dept. M1, Hollywood 28, Calif.

A DIFFERENT IDEA
in CREATIVE PHOTOGRAPHY
where Dmitri Kessel, Ben Schnall, Tom Leonard and other "famous professionals and amateurs" got their fine training. 34th year. Write for booklet M-31.
Rabinovitch Photography Workshop
40 W. 56 New York 19

WORLD'S MOST AMAZING BARGAIN CATALOG
SAVE UP TO 85% ON WAR SURPLUS
1954 EDITION—OVER 300 PAGES
Packed with SENSATIONAL VALUES in WAR SURPLUS, FACTORY CLOSE-OUTS and GENERAL MERCHANDISE!
Fully illustrated . . . Thousands of items including Bargains in Photo Supplies, Cameras Projectors, Film, Exposure Meters, Tripods, Lenses, Darkroom Equipment, Lights and many, many more. Also Tools, Outdoor & Sports Supplies, etc

Only 50¢ *Order Your Copy Today! We'll refund it on your first order of $1.00 or more.*
PALLEY SUPPLY CO. 2263 E Vernon Ave., Rm. 7 Los Angeles 58, California

to one which is largely, if not wholly mechanical. It takes no great prophet to predict that the task . . . will be accomplished before very long."

To do this he set his scientists to work under Dr. Mees. They came up with a process called Kodachrome in 1914—not the modern roll of color film you put in your camera today—but a little known two-color, separation-negative process. Two black-and-white negatives were made on panchromatic plates, through different colored filters, and then converted into dye positives. One was dyed orange, the other blue-green, and the two were bound together. While this process gave excellent portraits, it was not balanced for full color rendition, and was never marketed.

Next came Kodacolor—another name familiar to photographers today. Again, this film had no relation to the modern product. In 1928 a number of guests, among them Thomas Edison and General Pershing, were invited to Eastman's huge home at 900 East Avenue, Rochester, for the premiere. Several Kodak motion-picture cameras whirred as the guests walked around the grounds on the warm July morning. By evening of the same day the visitors saw themselves in color on the screen. This Kodacolor was available for motion pictures only. Said General Pershing, "It seems almost like a feat of legerdemain. . . . I should consider it must be the greatest development in photography." But popular as it became, it involved complicated lenticular optics, which often gave difficulty in projection.

Simpler color films for stills and motion pictures came later. This was after Eastman's death in 1932. Two musicians, Leopold Mannes and Leopold Godowsky, invented a subtractive color process which Kodak has marketed since 1935 under the name Kodachrome. The name Kodacolor was applied in 1941 to a contemporary process for still cameras, which gives color negatives and prints.

Changes galore

As *Wilson's Photographic Magazine* said in 1889, there seemed no end to "the revolutionary proceedings of Mr. Eastman and his company." Better X-ray plates and films were made. Special plates were devised for astronomers. World War I saw the development by Eastman Kodak of an aerial camera for the Army. And the Cine Kodak of 1923 did for the young home movie industry what the No. 1 Kodak camera did for stills.

Eastman's production of the first practical safety cine film cleared the way. Home movies were no longer dangerous. With the simultaneous appearance of daylight loading for new 16mm

(*Continued on next page*)

THE Strobonar® V
...most popular electronic flash unit ever produced

the perfect gift...

Overwhelming public acceptance has made the Strobonar V hard to buy since it was introduced. But now...in time for holiday giving...more and more V's are reaching dealers all over America.

You will be proud to give or receive the Strobonar as a gift this holiday season. And remember, a new replacement battery, the EVEREADY No. 497 is now available at Heiland and Eveready dealers.

HERE'S WHY THE STROBONAR V IS BEST:

Only 3¾ lb. shoulder weight. You can carry it for hours without tiring.

Compact, modern styling. Fits neatly under your coat for shooting weddings and other social events.

More light per ounce of weight than any other electronic flash unit. Gives you a guide number of 40-50 for reversal type daylight color films.

A single 510V dry battery—so light and compact you can carry several spares in a minimum of space for thousands of extra flashes.

Your Heiland dealer will gladly demonstrate the remarkable Strobonar V for you.

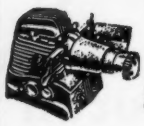
Heiland®
THE FINEST NAME IN FLASH

WRITE FOR FREE BOOKLET

130 E. Fifth Ave., Denver, Colorado • NEW YORK • CHICAGO • LOS ANGELES
KANSAS CITY • ATLANTA • ALASKA • HAWAII • CANADA • MEXICO

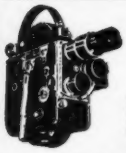
bargain headquarters

mitchell



BRAND NEW 35MM GOLDE MANUMATIC PROJECTOR
300 Watts, Blower Cooled, Ctd. f3.5 Lens
only **$43.50**

SAVE $24.00
BRAND NEW 2¼ x 2¼ GOLDE REFLEX PROJECTOR
300 Watts, Blower Cooled, Ctd. f3.5 Lens
35mm Adapters, with Case
Reg. $86.50 only **$62.50**



SAVE $110.00
BOLEX H16 LEADER
- Ctd. Lytar 1" f1.9 Lens
- 3 Lens Turret
- Critical Focuser
- Internal Frame Counter Hand Crank

Reg. $299.50 only **$189.50 USED**

SAVE $16. Brand New, Latest Model
2¼ x 2¼ RICOHFLEX VII
- Ctd. f3.5 Lenses
- Double Action Shutter
- Flash Gun
- Eveready Case
- Ground Glass Shows 2¼ x 2¼ and 35mm Fields

Reg. $58.50 only **$42.50**
35mm RICOHFLEX back $14.95
Plus 75c Postage

SPECIAL CLOSEOUT VALUES

30 DAY MONEY BACK TRIAL ONE YEAR GUARANTEE

35mm CAMERAS	NEW	USED	TRADE IN
BOLSEY B2, Ctd. f3.2, Cpld. R.F., Synch.	73.50	42.50	30.00
BOLSEY B22, Ctd. f3.2 Cpld. R.F., Synch.	79.50	49.50	35.00
BOLSEY, C2, Ctd. f3.2, Cpld. R.F., Synch.	109.50	69.50	45.00
KODAK SIGNET, Ctd. f3.5, Cpld. R.F., Synch.	92.50	57.50	45.00
KODAK RETINA IA, Ctd. f3.5 Xenar, Synch., Case		69.50	45.00
KODAK RETINA II, f2 Helicon, Cpld. R.F., Case		79.50	57.00
KODAK RETINA IIA, Ctd. f2 Xenona, MX Synch., Case	174.50	109.50	84.50
ARGUS C3, COMPLETE	69.50	39.50	30.00
KINE EXAKTA VX, f2 Ctd. Pre-set Biotar	363.00	239.50	199.50
LEICA IIIC, Ctd. f2 Summitar, Case		169.50	120.00
LEICA IIIF, Ctd. f3.5 Elmar, Case	278.00	215.00	140.00
LEICA IIIF, Ctd. f2 Summicron, Case	384.00	249.00	200.00
LEICA IIIF, Ctd. f1.5 Summarit, Case	435.00	275.00	225.00
8mm MOVIE CAMERAS			
BELL & HOWELL AUTO 8, 172 A, f1.9	194.00	119.50	90.00
DEJUR CITATION, f2.5	77.50	41.50	30.00
KEYSTONE 40, f2.5	79.50	47.50	30.00
REVERE 40, Mag., f2.5	99.50	65.00	40.00
16mm MOVIE CAMERAS			
B.&H. AUTOMASTER f1.9		149.50	110.00
B.&H. 200 T, f1.9	249.50	159.00	115.00
B.&H. 70 DL, f1.9	365.00	229.00	190.00
KODAK MAG., Ctd. f1.9	175.00	79.50	55.00
35mm STILL PROJECTORS			
GOLDE MANUMATIC PROJ., 300 Watts, Blower	58.50	36.50	20.00
TDC SHOWPAK	54.50	34.50	20.00
ARGUS PBB-300, Blower Case	49.50	32.50	23.00
ARGUS PB-300, Strip Print, Case	75.00	39.50	30.00
REFLEX CAMERAS			
ANSCO REFLEX, Ctd. f3.5	195.00	109.50	79.00
AUTO ROLLEIFLEX MX, Ctd. f3.5 Xenar, Case	265.00	169.00	135.00
ROLLEICORD IV, Ctd. f3.5 Xenar, Case	149.00	99.00	80.00
IKOFLEX II A, Ctd. f3.5 Tessar, Synch., Case	174.50	89.50	69.00

Mail orders promptly filled—Write Dept. M.

mitchell camera stores, inc.
127 WEST 60th STREET
New York 19, N. Y. • PL 7-6812

GEORGE EASTMAN

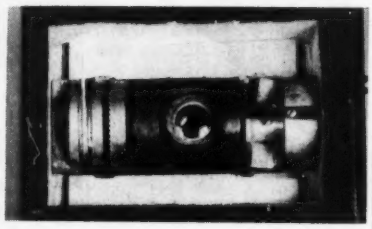
(*Continued from page 99*)

film, the amateur could load the Cine Kodak camera anywhere. After exposure the film was returned to the company in Rochester which processed it by the reversal method. Again the pattern repeats itself. Taking home movies in 1923 became as easy as making snapshots in 1888—simply by pressing the button.

Behind a multi-million firm

"You press the button, we do the rest." What caused the success of the idea behind this motto? The era was one of inventors and shrewd business men. But few could carry out their ideas on the scale Eastman did. It took a combination of inventor and organizer—financier and promotion man. It took toughness, courage, and the ability to make quick, correct decisions in the economic jungle of that era.

Eastman showed these traits with his decision to market a new kind of camera,



Lens of No. 1 Kodak was mounted in a rotating tube-shutter devised by Eastman. It was cocked by pulling a string at camera top—later released by pressing the button at the camera's side.

the No. 1 Kodak. They were evident in the way he handled every idea from its inception to the production line and the retail store. His associates knew a man who could look at a film sample—say instantly, "Go ahead. Make it." They knew the person who built his business almost single handed. He trained executives to take over as he grew older.

But the individual behind this—who knew poverty and turned in later life to the things he missed as a boy, whose labor policies were far ahead of his time, who as the mysterious "Mr. Smith" gave away millions—was little known by others. Instead a legend grew of a strong man, but a simple one, who disliked being photographed. While his Kodak films and cameras were sold throughout the world, Eastman often walked down the streets of Rochester unrecognized.—*End of Part I.*

Part II of the story of George Eastman will appear in the next issue of MODERN PHOTOGRAPHY.

PRICED AS LOW AS $42.50

America's Best Enlarger Buy

SUN RAY

Available at leading dealers Everywhere —or write for illustrated Literature.

SUN RAY PHOTO CO., INC.
301 LAFAYETTE ST.
NEW YORK, N. Y.

REMEMBER—AMONG FINER 35 MM CAMERAS, BOLSEY GIVES YOU MORE FEATURES THAN ANY OTHER CAMERA IN ITS PRICE RANGE!
FREE CATALOG, EXPOSURE GUIDE, WRITE
BOLSEY CORP. OF AMERICA, 116 E. 25 ST., N. Y. 10

X-PANDO
The Miracle Gadget Bag That G-R-O-W-S
#710X 14x10½x5 (closed) $19.95
#705X 9x10x3 (closed) $15.95
RUKO CO., 3 W. 18th St., N.Y.C. 1

Write for free 1953 catalog

Become a PROFESSIONAL PHOTOGRAPHER

• You can learn photography best under top-notch teachers. Franklin Technical Institute's faculty are successful professionals. They teach you from the wealth of their own experience. Intensive one-year course in portrait, industrial, commercial photography.

YOU PRACTICE ON THE FINEST EQUIPMENT
Guided by these outstanding men you handle *daily:* Deardorff, Graphic and other cameras; latest enlargers; 2 to 24" Bausch & Lomb and other fine lenses; light meters, etc. You study cameras, lenses, films; lighting, composition; retouching, finishing, mounting. Also science courses, business law. Limited registration. Coeducational. High school or equivalent required. *Write for free catalogue.*

FRANKLIN TECHNICAL INSTITUTE
Founded by bequest of Benjamin Franklin
40 Berkeley Street, Boston 16, Mass.

This Christmas Capture Your Child's Personality—Not Just His Profile!

It might take years to develop technique, but anyone can and everyone should capture the subject's personality. This Christmas is a good time to start.

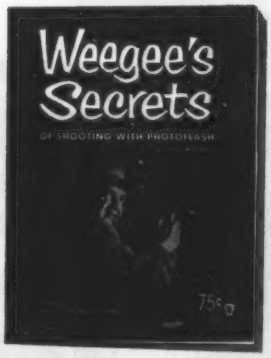
Have you ever noticed how much film and flash bulbs are wasted trying to pose children? And they *are* wasted, because all you actually need do is follow the child's regular routine. Every youngster rises, eats, and plays on a schedule of sorts. Stick to his schedule and there's enough "ham" in every child to give you all the interesting shots you want.

25 Years of Photoflash Experience in this 64-page booklet

The schedule method, along with putting life in party pictures, and character in portraits—is discussed in detail in "WEEGEE'S SECRETS OF SHOOTING WITH PHOTOFLASH". There are also chapters on capturing drama in news photography . . . shooting fires . . . selling your pictures . . . publicity for clubs . . . and many other shortcuts to prize-winning photography. And there are more than 40 of Weegee's photo classics.

You can't buy a copy in any store

But Westinghouse will send you one for just 25¢ and the wrapper from a carton of Westinghouse Flash Bulbs, mailed with the coupon below. Weegee claims he couldn't have shot his latest book "NAKED HOLLYWOOD" without dependable Westinghouse Photoflash Bulbs. Try them on his say-so.



ACTUAL SIZE: 6¼ x 4¾ inches

Partial list of contents:

- Photographing Children
- Putting "Life" In Party Pictures
- Putting "Character" In Portraits
- Drama in News Photos
- Photographer's "Place" at a Fire
- Selling Your Pictures
- Publicity for Clubs and Organizations

Yours for just 25¢
and one Westinghouse photo flash carton wrapper

Include a copy of "Weegee's Secrets" and a carton of Westinghouse flash bulbs with any photo equipment you give as a gift.

Westinghouse Lamp Division
Dept. MP-1
Bloomfield, New Jersey

Please rush my copy of "WEEGEE'S SECRETS OF SHOOTING WITH PHOTOFLASH". I am enclosing the wrapper from a carton of Westinghouse flash bulbs and 25¢ to cover postage and handling.

Name_____

Address_____

City_____ Zone_____ State_____

YOU CAN BE SURE... IF IT'S
Westinghouse

AMERICA'S ACE PRESS PHOTOGRAPHERS

CHARLES COOPER—N. C. Durham Herald and Sun. "No doubt about it . . . a press photographer's best friend is his versatile Pacemaker Graphic!"

RAN COCHRAN—Cincinnati Enquirer. "For the rugged all weather news grind, my first choice is always my dependable Pacemaker Speed Graphic!"

DURWOOD HAYES — Dallas Times Herald. "Day-in, day-out, on all assignments, my faithful Pacemaker Speed Graphic has never let me down!"

WAYNE BELL—Minneapolis Star and Tribune. "For over 18 years, a Speed Graphic has been the most important part of my photo equipment!"

BILL PEERY—Rocky Mountain News. "When the chips are down, I can count on my Pacemaker Speed Graphic getting the picture every time!"

THE PACEMAKER GRAPHIC

1ST CHOICE OF

Speed Graphic 4 x 5 illustrated.

3 Great Graphics Offer Every Modern Photo Refinement!

Pacemaker Speed Graphic — Precision built, high speed press and all purpose camera has focal plane shutter with accurately governed speeds to 1/1000th; ground glass focus; built-in flash synchronization; selector switch for front or rear shutter; coupled range finder (optional at extra cost); rising, shifting, tilting front; drop bed; and the famous Graflok Back. Sizes: 2¼ x 3¼; 3¼ x 4¼; and 4 x 5. **Priced from $228.00**

Pacemaker Crown Graphic — A wonderful performer for those who do not need the high speed of the focal plane shutter. Identical to the Speed Graphic in every other way.
Priced from $185.95

Century Graphic (2¼ x 3¼) — The most economical of the famous Graphics—but with many of their prize-winning features, including synchro-shutter; ground glass focus; coated color-corrected lens. **Now only $108.**

Prices subject to change.

GRAFLEX® *Prize-Winning Cameras*

SWEAR BY GRAPHIC VERSATILITY!

LARRY DION—Seattle Times. "There are just no better Press cameras made than the rugged, dependable Pacemaker Speed Graphics!"

NORMAN HILL – Ottumwa, Iowa, Daily Courier. "Many have tried, none has succeeded in replacing the Graphic as the most versatile press camera!"

JIM MAREK—Kankakee, Illinois, Daily Journal. "My rugged Pacemaker Speed Graphic takes a terrific beating . . . almost never needs a repair!"

JERVAS BALDWIN – Des Moines Register and Tribune. "No matter what the assignment, I know my Graphic will deliver the exact picture I want!"

GENE ABBOTT—Washington, D. C., Evening Star. "My Speed Graphic has proved its dependability by getting one 'only chance' shot after another!"

PRESS PHOTOGRAPHERS!

93.7% of Press Photographers Use Rugged, Versatile Graphics!

The world's working photographers—men whose very livelihood depends on making great pictures—have made the Pacemaker Graphics their overwhelming favorites. They have watched these great cameras prove their versatility and dependability day-in, day-out, in all weather, on all assignments.

As easy to use as a folding camera, the Graphic is instantly ready for everything from action to portraits. Although it is the symbol of the press photographer, it is the first choice of professional and commercial photographers, too, and does vital photo work for science and industry.

Today's great Graphics are the achievement of over 60 years experience in the precision-building of fine cameras. The Speed Graphic has the famous Graflex focal plane shutter—the only focal plane shutter that's been tried and proven in daily use by America's ace photographers. It gives direct readings of settings and provides *accurate* governed speeds up to 1/1000th. Such *proven* accuracy is now more important than ever, especially with color photography.

Owning a Graphic marks you as a photographer who is out of the snapshot class . . . one who knows the secrets of making great pictures. And one of these fine cameras, sturdily built to stand up under the rugged news grind and still deliver top quality pictures, will give you a lifetime of picture making pleasure. See them at your Graflex dealer's today!

Buy on easy time payments—
Many dealers offer Graphic cameras for as little as $2 per week!

Takes Widest Choice of Film!

Each of the three Graphics has the famous Graflok Back which accepts a wide variety of money-saving, time-saving attachments that let you use the exact film you want—black and white or color; sheet or roll. The Graflok Back may be bought separately and attached to earlier models.

The Grafmatic ($14.85 up) takes rapid fire sequence shots. Holds six sheets of monochrome or color film or both! For 2¼ x 3¼ or 4 x 5 Graphics.

The Riteway Film Holder ($4.15) assures overall picture sharpness. It is far stronger than wood – less vulnerable than metal. Guaranteed 2 years. For 4 x 5 Graphic.

The 120 Roll Holder ($18.95 up) quickly converts any Graphic to low cost roll film. It is compact, lightweight . . . has automatic film counter. Two picture sizes—2¼ x 2¼ and 2¼ x 3¼—for all three camera sizes.

FREE! 48-page booklet in full color! Tells you how to choose a modern camera. Advises you on the many versatile accessories which allow your camera to grow with your skill!

Graflex, Inc., Dept. 58E
Rochester 8, New York

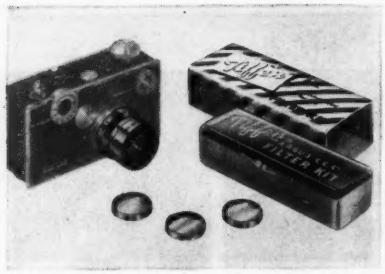
Please send Graflex's *new FREE 48-page booklet.*

*Name*_____

*Street*_____

*City*_____

*County or Zone*_____ *State*_____



the Gifts they'll really appreciate

Tiffen® "SEE-THRU"

FILTER KITS

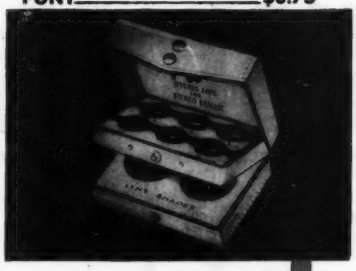
A sturdy, gleaming plastic "see-thru" case, complete with 3 Tiffen PHOTAR Filters (Type A #85, Skylight #1-A, #81-C) Tiffen Duraluminum Lens Shade and Adapter Ring, complete filter instructions . . . a terrific buy . . . a wonderful gift to give . . . or get!

Tiffen "SEE-THRU" FILTER KIT for ARGUS C, C2, C3 (pictured). Includes the famous Tiffen ARGUS DIAPHRAGM CONTROL . . . Complete $9.95

Tiffen "SEE-THRU" FILTER KITS are made for many popular cameras, including:

ARGUS C, C2, C3	$9.95	ARGUS 21	$8.95
LEICA (Elmar 50mm F:3.5, Summar 50mm F:2)			$8.95
SIGNET	$8.95	RETINETTE	$8.95
MERCURY II	$8.95	CIRO 35	$8.95
VITO II	$8.75	PONY	$8.75

Tiffen **STEREO SAFE**



Deluxe top-grain saddle-stitched leather case, custom matched to the Stereo Realist or Revere "33". Contains 3 matched mounted pairs of Tiffen coated PHOTAR Filters and a pair of matched Lens Shades in individual compartments, filter instructions and Tiffen Lens Gauze.

For Stereo Realist . . . $19.95
For Revere "33" . . . $17.95

Tiffen QUALITY PRODUCTS

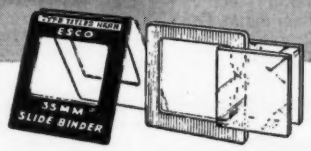
Write for FREE CATALOG

Tiffen MARKETING COMPANY
617-621 SACKETT STREET BROOKLYN 17, NEW YORK

PROTECT YOUR TRANSPARENCIES

Esco*

2" x 2"
NEW TYPE-ON MOUNTS
Quality Fibreboard Glass Slide Binders



100 Sets 35 MM COMPLETE WITH GLASS..... $3.25
100 Sets in Bantam Size.....$3.15

- PREGUMMED
- LINTLESS
- SHOCKPROOF
- DUSTPROOF
- NEW JIFFY-JIG . . . accurate mounting in seconds • New heavy kraft gummed masks • Easy TYPE-ON identification

BOXES OF 20: 35 MM 80c; BANTAM 85c
SLIGHTLY HIGHER IN FAR WEST

New! Better than ever!
2" x 2" MAGIC MOUNTS
35 MM Aluminum Glass Slide Binders

Box of 18 $1.75 Box of 100 $7.50

ONLY ESCO GIVES YOU ALL THESE DELUXE FEATURES:

- Direct Write-On Titling—NO Labels
- Lintfree Shock Absorbers—NO Breakage
- Glass Protection • Precision Centering
- Easiest to Assemble • Reusable

Ask for Esco low-cost Glass for Slides
Smooth Cut or Ground Edge - All Sizes

MANUFACTURED BY
ERIE SCIENTIFIC CORP.
BUFFALO 10, NEW YORK

YOUR DEALER HAS THEM OR CAN GET THEM FOR YOU

WHY THE BLUR?

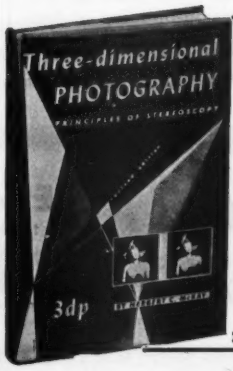
(Continued from page 61)

ground does not move as swiftly or as far during a step as the body or the foot in the air.

How do you photograph children in action? What does the world look like when you are a child playing a game? Don Langer thought he had the answer. He planned to photograph his daughter and a group of her friends playing. The Rolleicord was set at a 1/25 sec. and a Flash unit was used at the camera position with Sylvania Bantam 8 bulbs. The flash of the tiny bulb registered the primary images of the children while the slow shutter speed caused secondary, blurred, images. The camera was panned in the direction of the action—thus the horizontally blurred background (*picture, bottom page 60*).

From children, we turn to music. What, in a picture, differentiates the jazz musician who improvises from the Bach interpreter? Jay Maisel had been attempting to photograph the former for weeks using fast shutter speeds and wide apertures. To him the sharp results lacked the impressionistic, atmospheric quality of the music and the men who made it. He changed his method of approach—set his Plus-X loaded Kodak 35 to 1/10 sec. and f/5.6 and made several exposures. The results, he felt, more fully explain his subjects and his feelings about them (*picture page 61*).

These then are the techniques employed by five different photographers to photograph five different types of action. Perhaps one of the five techniques will suit your particular needs. If not, you'll have to work out your own solution. But in no case use blur as an excuse for good technique. If blur does not add to your picture, if it makes the understanding of your photograph more difficult, it is not being used correctly. And don't make the blur a trademark of your work. Use it sparingly and thoughtfully so it becomes one more technique mastered and fitted into its proper place among your other photo accomplishments.—THE END



"a MUST for Every SERIOUS STEREO photographer!"

Says Modern's review of the bigger, revised Three Dimensional Photography, by Herbert C. McKay, one of the world's leading experts on the subject. Every phase of stereo, both movie and still, exhaustively and competently covered. $8.75 Add 3% sales tax for New York City delivery

Modern Photography Book Store
251 4th Ave., N. Y. 10, N.Y.

PORTRAITS BY MOSES

(Continued from page 51)

rollfilm adapter loaded with Super-XX. Moses often uses this sketching technique to break the ice with his subjects.

In earlier days he used DL paper for his prints, but he didn't like the "salon" look, so now his work is all printed on Defender BT No. 2 or No. 3. Moses prints with a 20-year-old Muller-Wetzia enlarger, but he's considering a new Omega. His paper developer is a concoction of his own consisting of dilute D-55 modified with old developer, sodium carbonate, bromide, and orthothiazole. His negatives are processed 16 to 30 minutes in a highly diluted developer of glycin, sodium carbonate, sodium sulfate, and a trace of metol. He came to this formula after years of trying packaged developers which did not meet his personal exacting requirements—once again, grain, his pet aversion. In the past he has done considerable experimenting with solutions, but now he says, "I must be getting conservative, I haven't changed developer in two years."

Influence of others

Aside from his portrait work, Moses does some landscapes, mostly with a Rolleiflex, and he has even done some still-lifes. But his *forte* is clearly people's faces, though his flawless technique is always evident even in the other work.

Moses feels he was greatly influenced by Hugo Erfurth, a German portraitist little known in this country. And he grants Ansel Adams a role in his technical development. Among American photographers, he finds Paul Strand (MODERN, Sept., 1953) and Gene Smith the most satisfying, prefers Strand even to Weston, whom he considers brilliant but somewhat limited.

Men are too vain

Among subjects, he prefers women and even young girls to men. "The men," he says, "are too vain, too introverted to open up completely—even to a doctor. Women are quick, even anxious to reveal their feelings. And sometimes even a very young girl will let her face show evidence of mature emotions yet unfelt."

Moses says that if he had the time and the energy, he would like to do much more shooting outside his studio. "There is so much material even right here in this city. No one could ever get it all." But with his medical practice occupying so much of his time, he feels he can continue to find creative satisfaction with his portrait victims, "peeling off their outer layers of defense, making them reveal themselves to the lens" and ending with his "big heads," abstractions of the insides of people.—THE END

Ω omega

famous for precision . . . preferred for versatility

omega D-2

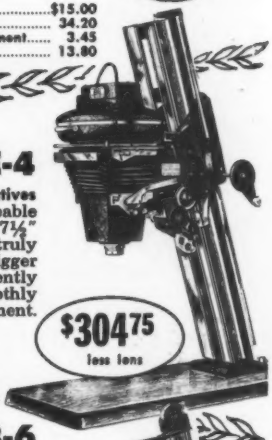
for 35mm to 4"x5" negatives

Scientifically designed to produce maximum size enlargements with all negatives, using interchangeable lenses, 2" to 6½". Provides unsurpassed evenness of illumination by matching optically correct interchangeable condensers with the focal length of each enlarging lens employed. **CONDENSER MODEL . . . $168.50**

with Colorhead $183.50
Omegalite Model $159.40

Accessories for every enlarging job!
OMEGALITE—Replaces condenser lamphousing, reducing need for spotting and retouching by suppressing grain, dust, scratches and other negative defects. Also perfect for portraits and other less contrasty prints. $42.75

Colorhead Attachment	$15.00
Copy Attachment	34.20
Portrait Soft Focus Attachment	3.45
Rapid-Shift Filmholder	13.80



Autofocus
automega E-4

for 2¼"x3¼" to 5"x7" negatives

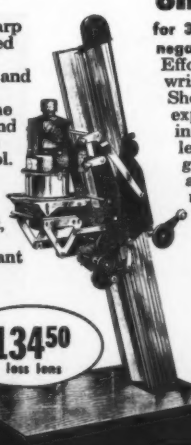
The only truly autofocus 5"x7" enlarger for interchangeable lenses. Each lens with focal lengths of 3½" to 7½" is matched to its own track at our factory for truly needle-sharp autofocus operation. Trigger starting Omegalite-type illumination gives consistently high light output for uniform exposures. Smoothly operating rack and pinion carriage movement.

$304.75 less lens

Autofocus
automega B-5

for 35mm to 2¼"x3¼" negatives

Reliable, needle-sharp autofocusing. Rugged vibration-free construction. Rack and pinion hand wheel raises and lowers the projector quickly and easily for finger-tip magnification control. Ventilated lamphousing and very high light output permit short, cool exposures for outstandingly brilliant prints, including giant-size (up to 15 times) enlargements!



$134.50 less lens

omega B-6

for 35mm to 2¼"x3¼" negatives

Effortless, twist-of-the-wrist manual focusing. Short, evenly illuminated exposures and interchangeability of lenses (2" to 3½") for giant enlargements with all negatives. You will marvel at the convenience of the new lamphouse lifting levers and the ease of the rack and pinion hand wheel movement for finger-tip magnification control.

$109.50 less lens

Prices Slightly Higher on West Coast

VALUABLE BOOKLET FREE! An informative booklet of ideas and suggestions: "The 3 Basic Points of Print Quality."

SIMMON BROS., Inc.
30-28 Starr Ave.
Long Island City 1, N. Y.

SIMMON BROS., INC. Dept. MP1
30-28 Starr Ave., Long Island City 1, N. Y.
Please send my FREE copy of "The 3 Basic Points of Print Quality."
NAME_____
ADDRESS_____
CITY_____ZONE____STATE_____

Any Picture is Just A Snapshot Until It's OMEGA Enlarged!

"I tried it myself"

SECOND PRIZE $15. Here's a very pleasing shot of a pretty girl with an extremely natural prop—an earring. Robert Schmalzreid, of Pittsburgh, used a Kodak Pony 135, Plus-X, 1/50 at f/11.

DON'T put your camera away at the end of the afternoon. Outdoors—especially in winter at sunset—you'll spot provocative forms in the interesting nuances of winter shadow and light. Often these must be photographed by using slow shutter speeds—1/10th, 1/5th, one second, and perhaps longer, depending on the light conditions under which you're shooting. Of course, always use a tripod or some other sturdy support for your camera during such lengthy exposures.

Even *after* dark there'll be opportunities to shoot by existing light. This may include illumination from street lamps or headlights, from bonfires, or from the glittering bulbs of your local theater marquee.

"I Tried It Myself" is a monthly black-and-white contest with few rules. Any reader may submit any number of pictures, 4 x 5 or larger, provided he puts his name, address, and complete technical data on the back of *each* print. Pictures which we cannot use will be returned if you include postage. All contributions are considered for use elsewhere in the magazine. Send them to The Columns Editor, MODERN PHOTOGRAPHY, 251 Fourth Avenue, New York 10, N. Y.

MODERN PHOTOGRAPHY'S MONTHLY CONTEST

FIRST PRIZE $25

SECOND PRIZE $15

THIRD PRIZES $10

THIRD PRIZE $10. ***The Lady and the Tiger,*** **by Tom Moore, of Los Gatos, Calif., was made with a Busch Pressman camera, 1/50 at f/4.5. A No. 2 photoflood, held high, gave soft light, accented hair and fur. "Put something in their hands," urges Moore.**

$25 FIRST PRIZE, for *City Sunset*, is awarded to John Shaw, of New York City. Using a Rolleiflex and a medium yellow filter, he made this unusual pictorial shot from his own roof. The exposure was 1/100 at f/8 on Super-XX. Shaw printed dark, purposely, and made the striking black forms even stronger sillouettes against the highlighted evening sky.

THIRD PRIZE $10. The festive spirit of *New Year's Eve*, was caught by F. B. Grunzweig, of New York City. Utilizing a patch of light from a theater marquee in Times Square, at midnight, he handheld his Leica 1/10th sec. at f/2.

THIRD PRIZE $10. Equipped with electronic flash, Lawrence Schiller, of San Diego, Calif., was alert and ready to shoot when he made this split-second shot, *Track or Basketball?* Speed Graphic, 4 x 5 fast film, and a Strobonar III, f/16.

PERFECTION
THROUGH
SCIENTIFIC ANALYSIS
HAS MADE...

GOERZ
PHOTO LENSES
The UNIVERSAL FAVORITE!

Quality production and skilled craftsmanship make available the world's finest photo lenses.

•

DAGOR ANASTIGMAT
F:6.8 and F:7.7
Universal All-Purpose Lens

•

RECTAGON ANASTIGMAT
F:6
Excellent definition, color correction and 90° Field Coverage

•

WIDE-ANGLE DAGOR ANASTIGMAT
F:8
Wide-Angle 100°

•

DOGMAR ANASTIGMAT
F:4.5
Perfect Speed Lens

Consult your dealer for details or write Dept. MP-32

C. P. GOERZ AMERICAN
OPTICAL COMPANY
Office and Factory
317 EAST 34th STREET
NEW YORK 16, N. Y.

35MM CLOSEUP EQUIPMENT LISTING

(*Continued from page 82*)

Kilarflex and Kilarscope Prism Reflex Housings (*Germany*). Distr. Kling Photo Corp., 235 Fourth Ave., New York 3, N. Y. Kilarflex is waist-level viewing. Kilarscope has roof prism for eye-level operation. Provision for vertical shots. Minimum focal length that can be focused on infinity, 90mm in short mount. For Leica, Tower, Kilarflex $64.80, Kilarscope $99.75. For Contax IIa, IIIa and Nikon, Kilarscope $124.75. Kilarflex $9.75.

Mirroscope (*Japan*). Distr. Interstate Photo Supply Corp., 28 W. 22 St., New York 10, N. Y. Waist-level viewing. Eye-level viewing with accessory roof prism. Minimum focal length that can be focused on infinity, 73mm in short mount. For Leica, Canon, Kardon, Leotax, Nicca, Tower $69.95. Roof prism $39.95.

Leitz Mirror Reflex Housing (*Germany*). Distr. E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. Waist-level viewing. Eye-level viewing with accessory roof prism. Provision for vertical shots. Minimum focal length that can be focused on infinity, 135mm in short mount. For Leica. Price with 5x magnifier $102. Other magnifiers are available.

Novoflex (*Germany*). Distr. Novoflex Div., Camera Specialty Co., 705 Bronx River Rd., Bronxville 8, N. Y. Model NOSE for waist-level viewing. Model NOPRI for eye-level viewing with roof prism. Provision for vertical shots. Minimum focal length that can be focused on infinity, 135mm in short mount. For Leica, Canon, Kardon, Leotax, Nicca, Tower. Model NOSE $129.50. Model NOPRI $169.50.

Panflex (*Germany*). Distr. Carl Zeiss Inc., 485 Fifth Ave., New York 17, N. Y. Eye-level viewing, has roof prism. Provision for vertical shots. No provision, or lenses available at this time, for infinity operation. For Contax II, III, IIa, IIIa $135.

Voigtlander Reflex Housing (*Germany*). Distr. Willoughbys, 110 W. 32 St., New York 1, N. Y. Contains rear lens component of telephoto and wide-angle lenses for Prominent camera. Front lens components are added for use. Can be used for limited amount of close-up work with supplementary lenses. Waist-level operation. Eye-level operation with accessory roof prism. Provision for vertical shots. For Prominent $159.50. Accessory prism $45.

RANGEFINDER SUPPLEMENTS

Canon Auto-Up (*Japan*). Distr. Balfour, Guthrie & Co. Ltd., 67 Wall St., New York 5, N. Y. For Canon 50mm f/1.8 lens. Focuses from 22 in. to 40 in. $18.95.

Nooky Optical Close Focusing Device (*Germany*). Distr. E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. Focuses from 3½ ft. to 16½ in. from *film plane*. Models for 50mm Elmar, Summar, Summitar and Hektor lenses. Specify lens when purchasing. $31.50.

Pleasant Auto-Up (*Japan*). Distr. Manhattan Photo Supply Co., 222 Fourth Ave., New York City 3, N. Y. Focuses to 20 in. Models for Leica, Elmar, Summar, and Summitar, Canon Serenar f/1.8 and f/1.9, and Nikkor f/1.4 lenses. $19.95 for lenses up to 36mm diameter; $22.95 for lenses up to 42mm diameter.

Auto-Up Super-Nooky (*Japan*). Distr. Photographic Importing and Distributing Corp., 32-34 Steinway St., Long Island City 3, N. Y. Focuses to 20 in. For Leica, Summar lens $19.95. For Leica, Summitar lens $19.95. For lenses up to 42mm diameter $22.95. For lenses up to 36mm diameter $22.95.

Nikon Close-Up Attachment (*Japan*). Distr. Nikon Camera Co., 25 California St., San Francisco 11, Calif. Focus from 1.5 ft. to 2.6 ft. Models for 50mm f/2 and f/1.4 Nikkor lenses, $41.50 each.

Konica Auto-Up (*Japan*). Distr. Konica Camera Co., 76 W. Chelten Ave., Philadelphia 44, Pa. For Konica cameras. Focuses from 40 in. to 20 in. $9.

Opti-Klos (*U.S.A.*). Distr. Opti-Tek, Box 5 B, Calif. For Argus C-2 and C-3. Model 1.5 focuses at 26 in. only. Model 3 focuses at 13½ in. only. Either model $7.95. If ordered together $12.95 per pair.

Proxifocuser AR (*U.S.A.*). Distr. Spiratone, 32-34 Steinway St., Long Island City 3, N. Y. For Argus C-2 and C-3. Model 1 for distances from 39 in. to 21 in. Model II for distances from 20 in. to 14 in. Model III for distances from 13 in. to 9 in. All models $4.95 each.

Proximeter (*Germany*). Distr. Willoughbys, 110 W. 32 St., New York 1, N. Y. Model 1 for distances from 38 in. to 20 in. Model 2 for distances from 20 in. to 13 in. Models 1 and

2 may be combined to focus on distances from 13 in. to 10 in. For Argus C-2, C-3 $24.95, for Bolsey B2 and B22 $19.95, for Contax $40.50, for Contessa $30.50, for Leica with Summitar $30.50, for Prominent $26.50, for Retina $24.95, for Signet $19.95, for Vitessa $26.50, for Vito III $21.95. Adapters for Leica model with 50mm f/3.5 Elmar, 50mm f/2 Summar, 50mm f/1.5 Summarit and 50mm f/2 Summicron $1.45 ea.

ACCESSORY CLOSE-RANGEFINDERS

Contameter Near-Focusing Equipment (*Germany*). Distr. Carl Zeiss Inc., 485 Fifth Ave., New York 17, N. Y. For close-ups at 8, 12 and 20 in. only. Reproduction ratios of 1:4, 1:6.5 and 1:10. Combined range and viewfinders. For Contessa, Contax I, II, III, IIa, IIIa $81.

Kodak Close Range and Viewfinder (*Germany*). Mfr. Eastman Kodak Co., 343 State St., Rochester 4, N. Y. Consists of combined range and viewfinder and three supplementary lenses. Three focusing ranges of 47.8 cm to 90 cm, 34.5 cm to 44 cm, and 22 cm to 28 cm. Also available marked in inches. For Kodak Retina II camera. $48.

FOCAL FRAMES, VARIABLE

Cal-Cam Focus Guide (*U. S. A.*). Distr. Cal-Cam, 1564 North Grand Oaks Ave., Pasadena 7, Cal. For use with all 35mm and Bantam cameras. Specify camera model when ordering. Gives correct working distances and field sizes for +2 and +3 closeup lenses. Camera slides on two rods marked with working distances obtained from tables supplied with closeup lenses. Frame at end of rods is adjustable for field sizes also obtained from same tables, $8.95.

LENS EXTENSIONS

Editor's Note: Extension tubes follow bellows listings.

Alpa Bellows Attachment (*Switzerland*). Distr., Karl Heitz Inc., 150 W. 54 St., New York 19, N. Y. Extends 58mm to 205mm, has removable lensboards, focuses by moving lens or camera body. For Alpa Reflex cameras. $79.50.

Multiscope (*Germany*). Distr. Aetna-Optix, 350 W. 31 St., New York 1, N. Y. For Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, Exa, Exakta, Leica. Extends 58mm to 205mm. Interchangeable lensboards accommodate variety of lenses in barrels or shutters. Length of extension engraved on focusing track; rear or front focusing. $49.50. Extra lensboards $2.85 each.

Magniscope Extension Bellows (*Germany*). Distr. Burke and James Inc., 321 S. Wabash Ave., Chicago 4, Ill. Model P for Contax-D, Contax-S, Pentacon, Praktica, Praktiflex. Model E for Exa, Exakta: Extends to 150mm. Folds to 2 in. $29.95.

Leitz Bellows Focusing Device (*Germany*). Distr. E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. For Leica. Various models for use with Focaslide and Reflex Housing and various camera and lens combinations available. $58.50.

Proflex (*Germany*). Distr. Sperling Camera Accessories, 11 West 20th St., New York 11, N. Y. For Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, Exa, Exakta, Leica, Canon, Kardon, Leotax, Nicca, Tower. Extends 50mm to 155mm. Folds like camera; $29.95. Model with built-in 50mm f/2.8 Periplanatic lens, for focusing from infinity to 1:1 ratio to be announced soon.

Kilfitt Bellows Focusing Attachment (*Germany*). Distr. Kling Photo Corp., 235 Fourth Ave., New York 3, N. Y. Extends 1 in. to 6 ins. NABA for Leica, $40.50; NABAX for Exa or Exakta, $44.50; NAPRA for Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, $44.50. Adapters to convert NABA for Exa and Exakta, Contax-D, Contax-S, Pentacon, Praktica and Praktiflex cameras available.

Bellowscope, Bellowscope Jr., Super Bellowscope (*Japan*). Distr. Photographic Importing and Distributing Corp., 32-34 Steinway St., Long Island City 3, N. Y. Bellowscope for Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, Exa, Exakta, Leica, Canon, Kardon, Leotax, Nicca, Tower. 36mm to 125mm extension. Magnifications and exposure factors for 50mm and 105mm lenses engraved on focusing track $29.95. Bellowscope Jr. for Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, Exa, Exakta, Leica. 50mm to 155mm extension folds like camera $19.95. Super-Bellowscope for Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, Exa, Exakta, Leica. Extends to 150mm. Folds to 2 in. $14.95.

Novoflex Bellows (*Germany*). Distr. Novoflex Div. Camera Specialty Co., 705 Bronx River Road, Bronxville 8, N. Y. Models for Alpa Reflex, Contax-D, Contax-S, Pentacon, Praktica, Praktiflex, Exa, Exakta, Leica, Canon, Kardon, Leotax, Nicca, Tower. 36mm to 125mm extension. Has magnifications and exposure factors for 50mm and 105mm lenses engraved on focusing track. $44.50. Double car-

(*Continued on page 110*)

learn to earn at

BROOKS INSTITUTE OF PHOTOGRAPHY

Study

PROFESSIONAL PHOTOGRAPHY

In Beautiful Santa Barbara, Calif.

"Where the Mountains Meet the Sea"

Advantages of Studying at BROOKS INSTITUTE

- Train with World Famous Instructors
- Enjoy the Photographic School With a Spacious Campus
- Complete 24-month Courses in:
  Professional Portraiture
  Illustrative Photography
  Advertising, Fashion, General Commercial, Pictorial-Journalism
  Color Printing and Techniques
- Short Courses
  Tailored to individual's special needs. One week or more. May enter at any time.
- Motion Picture Courses*
  General Commercial, Television Productions, Dramas and Plays

Co-Educational
Approved for Veterans
Service and Placement Bureau

*Course not approved for Veterans

The Gateway to a Photographic Career

FREE Complete descriptive material of the unique BROOKS "Learn By Doing" system. Mail coupon today!

BROOKS INSTITUTE, Dept. 4
Santa Barbara, California
Gentlemen: Please send me full descriptive literature. I am interested in
☐ 24-month course ☐ Short Course
☐ Motion Picture Course
Name.....
Street.....
City.....Zone....State.....
☐ I am a Veteran ☐ Non-Veteran

NO MORE
WASTED BULBS..
SPOILED FILM..
LOST PICTURES..

PRACO BC
COMPRESSO-FLASH

with
- BUILT-IN TEST LIGHT
- 3-WAY PLASTIC FLASH SHIELD
- UNBREAKABLE PLASTIC CASE.

OPERATES FOR YEARS ON A SINGLE BATTERY!

Compact, Long-lived, Economical, Dependable! Unique lock-nut allows shoe to fit accessory clip for almost every make of camera.

List Price **$9.85**
including 22½ volt battery

THE ONLY FLASH
with
ADJUSTABLE SOCKET FOR BOTH STANDARD AND MIDGET BULBS!!!

PRACO
DUO-FLECTOR

The most sensational advance in flash gun engineering in years. Takes either size bulb without addition of an adapter. Incorporates all the major improvements of existing flash guns plus many unique, patented features which assure peak flash performance and complete reliability. Made to fit most popular make cameras.

List priced from **$14.25**

ALL PRACO PRODUCTS ARE UNCONDITIONALLY GUARANTEED AGAINST ANY DEFECTS IN MATERIALS OR CONSTRUCTION.

Praco PHOTO PRODUCTS CO. INC
2288 AMSTERDAM AVENUE NEW YORK 33, N. Y.

LENS EXTENSIONS

(*Continued from page 109*)

riage model permits racking camera body backwards and forward. Provision for vertical and horizontal pictures. $75. Bellows for Novoflex Reflex Housing $29.50.

Alpa Extension Tubes (*Switzerland*). Distr. Karl Heitz Inc., 150 W. 54 St., New York 19, N. Y. For older model Alpa Reflex cameras: Tuban 1, 6mm $2.70. Tuban 2, 12mm $3.30. Tuban 3, 24mm $3.60. Tuban 4, 48mm $4.20. Male intermediate ring "A" fits camera, 3mm $6. Female intermediate ring "B" fits lens, 3mm $7.20. Complete set of 4 Tubans and male and female intermediate rings $27. Special 37mm tube for 300mm f/5.6 lens only $12. For Alpa Reflex Models 4, 5 and 7: Tuban 1, 6mm $3. Tuban 2, 12mm $3.60. Tuban 3, 24mm $4.20. Tuban 4, 48mm $4.80. Male intermediate ring "A" fits camera, 6mm $6.90. Female intermediate ring "B" fits lens, 6mm $7.20. Complete set of 4 Tubans and male and female intermediate rings $27.90. Special 37mm tube for 300mm f/5.6 lens only $9.90.

Shull-Meyer Extension Tubes (U.S.A.). Distr. Shull-Meyer, 8681 Melrose Ave., Hollywood 46, Calif. For Argus 21: No. 181, 3/16 in. $2.30. No. 182, 3/8 in. $2.30. No. 183, 3/4 in. $2.80. No. 184, 1½ in. for use with microscope $3. For Argus C-2 and C-3: No. 141, 3/16 in. $2.30. No. 142, 3/8 in. $2.30. No. 143, 3/4 in. $2.80. No. 144, 1½ in. for use with microscope $3. For Clarus: No. 194, 9/16 in. $2.30. No. 195, 1⅛ in. $3. No. 196, 2¼ in. $3.30. For Exakta: set of 3 tubes, 7mm, 12mm and 22mm, male and female adapters plus supplementary lens to eliminate blind spots $22.85. For use directly with Leica, Canon, Kardon, Leotax, Nicca and Tower cameras, and for Exakta, Contax II, III, IIa, IIIa and Nikon cameras with adapters. No. 1007, 7mm. $2.30. No. 1012, 12mm $2.30. No. 1015, 15mm $2.30. No. 1022, 22mm $2.80. No. 1030, 30mm $2.80. No. 1045, 45mm $3. No. 1060, 60mm $3.30. No. 1090, 90mm $4.

Exakta Extension Tubes (*Germany*). Distr. Exakta Camera Co., 705 Bronx River Rd., Bronxville 8, N. Y. For Exa and Exakta: Set of 3 tubes 5mm, 15mm, 30mm plus 10mm male and female adapters $24. On request: special ring to permit rotating lens to facilitate reading of diaphragm. Additional set of 3 tubes 15mm, 30mm, 45mm, no adapters $10. Two-in-one adapter 5mm extension; one end accepts lens, other end fits camera, $10.

AIRES
AMERICA'S BEST REFLEX BUY!
Aires Camera Co., 263 Canal St., N. Y. 13

SECOND PRINTING
1953-54 CATALOG
Just Off The Press!

Our Mammoth Edition, the MOST GIGANTIC CATALOG in the photographic industry, has 274 pages, over 1000 illustrations, more than 10,000 items, plus order blanks and oodles of information.

Send $1.00 for your copy—deductible with first $5.00 order

IT ACTUALLY COSTS YOU NOTHING—SO GET IT NOW!

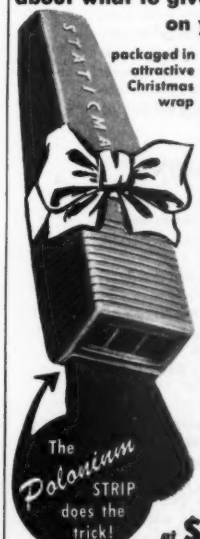
BLOOM'S PHOTO SUPPLY, INC.
1657-M Main St., Springfield, Mass.
New England's Largest Mail Order House
"We Ship All Over The World"

Be a
TELEVISION CAMERAMAN
Work with "live" equipment in station-size studios. TRAIN with "Big Name" TV instructors. Graduates employed at leading TV stations. Easy payment plan. Free National Placement Service. Housing accommodations secured. Approved for Vets.
Send for FREE Booklet P-2
TELEVISION WORKSHOP
1780 Broadway, New York 19, N. Y. PLaza 7-3721

DON'T MISS THESE WONDERFUL BARGAINS IN
LENSES & PRISMS
We have Binoculars, Magnifiers, Telescopes, Photographic Gadgets. Literally millions of War Surplus Lenses and Prisms for sale at Bargain Prices! Achromatic Lenses, Condensing Lenses, Tank Prisms, Bubble Sextants, Polarizing Attachments, Periscopes, Filters, etc. Catalog "M," FREE on request.
Send $1.00 for Stock 2-M 10-Piece Lens Kit and Big Instruction Booklet.
EDMUND SCIENTIFIC CORP. BARRINGTON, N. J.

Up in the air

about what to give that foto fan on your Christmas list?



packaged in attractive Christmas wrap

GIVE
STATIC master
the most valuable tool the photographer can own

Staticmaster completely eliminates dust, the curse of all photographers. It cleans negatives, color transparencies, film holders, enlargers, printers and optics. With a gentle brushing action, Staticmaster instantly destroys static surface attraction and removes all dust and lint present, as well. Better yet, the neutralized surfaces will remain *free* of dust and lint. Give Staticmasters as practical Christmas gifts to all your photographic friends . . . you'll be thanked for many Christmases to come.

at $4.95 the perfect gift
Professional 3" Size $12.50

Buy Staticmasters at your local photographic store or sent postpaid if cash with order.

NUCLEAR PRODUCTS CO. 10177 E. RUSH ST. EL MONTE, CALIF.

Extension Tubes (*Japan*). Distr. Photographic Importing and Distributing Corp., 32-34 Steinway St., Long Island City 3, N. Y. For Argus C-2, C-3: set of 3 tubes, 5mm, 15mm, 30mm $5.95. For Contax I, II, III, IIa, IIIa and Nikon 5-piece set, 3 tubes plus male and female adapters. Price upon request.

Robot Extension Tubes (*Germany*). Distr. Intercontinental Marketing Corp., 251 Fourth Ave., New York 10, N. Y. For Robot Cameras: Set of 4 tubes 5mm, 7.5mm, 10mm, 20mm, $13.50.

Extension Tubes (*Germany*). Distr. Ditto Camera Corp., 527 Fifth Ave., New York 17, N. Y. For Ditto 99: set of 3 intermediate rings, for use with Ditto close-up and copying device, 11mm, 22mm, 44mm $9.95

Extension Tubes (*Germany*). Distr. Sperling Camera Accessories, 11 West 20th St., New York 11, N. Y. For Contax-D, Contax-S, Pentacon, Praktica and Praktiflex: set of 3 tubes, 5mm, 15mm, 30mm $8.95. For Exa and Exakta: set of 3 tubes, 5mm, 15mm, 30mm plus male and female adapters 10mm $12.50. For Leica: set of 4 tubes, 5mm, 15mm, 30mm, 45mm $22.95.

Extension Tubes (*Germany*). Distr. Manhattan Photo Supply Co., 222 Fourth Ave., New York 3, N. Y. For Exa and Exakta: Set of 3 tubes, 5mm, 15mm, 30mm plus 10mm male and female adapters $12.95. For Contax-D, Contax-S, Pentacon, Praktica, Praktiflex: Set of 3 tubes, 5mm, 15mm, 30mm, $8.95.

Pentacon Extension Tubes (*Germany*). Distr. Pentacon Corp., 705 Bronx River Road, Bronxville 8, N. Y. For Pentacon: Set of 3 tubes, 5mm, 15mm, 30mm, $15.

Praktiflex Extension Tubes (*Germany*). Distr. Praktica Co., 705 Bronx River Road, Bronxville 8, N. Y. For Praktiflex: Set of 3 tubes, 5mm, 15mm, 30mm, $15.

Rectaflex Extension Tubes (*Italy*). Dist. Director Products Corp., 570 Fifth Ave., New York 19, N. Y. For Rectaflex: Set of 4 tubes totaling 75mm, $24.

Leica Extension Tubes (*Germany and U.S.A.*). Distr. E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. For Leica: 7mm, $1.20; 15mm, $1.50; 26mm, $2.70; 30mm, $2.70; 45mm, $3.42; 60mm, $3.77; 90mm, $4.44.

Kilfitt Extension Tubes (*Germany*). Distr. Kling Photo Corp., 235 Fourth Ave., New York 3, N. Y. For use with Leica and for Contax I, II, III, IIa, IIIa, Exakta, Contax-D, Contax-S, Pentacon, Praktica and Praktiflex cameras with adapters: Set of 3 tubes, 7mm, 15mm, 30mm, $6.90. Set of 3 tubes, 45mm, 60mm, 90mm, $11.40.

(*Continued on page 112*)

PERFECT FLASH PICTURES

SHARP. FROZEN ACTION

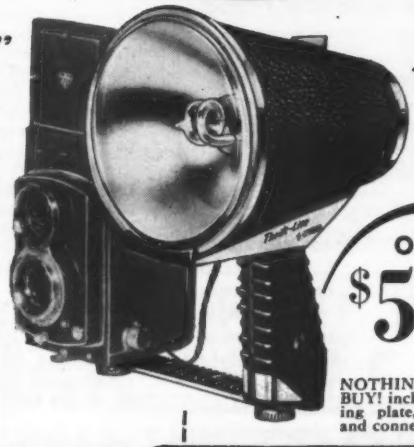
WITHOUT COSTLY FLASH BULBS

NEW! ph tak
Thrift-Lite
ELECTRONIC FLASH UNIT

Here's Why Thrift-Lite Is Your "Best Buy"

- Light weight, scientifically balanced. Weighs only 1.7 lbs.
- Super fast flash (1/1000 sec.) stops action perfectly every time.
- Compact, one-piece unit. Easy to use . . . a beautiful accessory to your camera.
- Thrift-Lite Accessories. With battery pack, the Thrift-Lite becomes a versatile, completely portable unit. Light output can be doubled with addition of intensifier unit. Both can be added without fear of obsolescence—no loss of original investment.
- Simple, trouble-free design. ENTIRE UNIT GUARANTEED FOR ONE FULL YEAR. FLASH TUBE GUARANTEED *FOR LIFE.*

Ask Your Dealer for a FREE Demonstration



EXCLUSIVE EXPOSURE DIAL

Shows you exactly what exposure to use with any film—eliminates blanks, under and over-exposures.

ONLY $59.50 COMPLETE A.C. UNIT

NOTHING ELSE TO BUY! includes mounting plate, sync cord and connector tip.

MAIL COUPON FOR FREE BROCHURE

PHO-TAK CORPORATION Dept. M-1
17 N. Loomis St., Chicago 7, Ill.
Please send me complete information on the new Thrift-Lite.
Name _____
Address _____
City _____ State _____

ph tak
PHO-TAK CORP.
Mfrs of precision-engineered cameras and photographic equipment

DON'T GUESS! GET GOOD PICTURES EVERY SHOT!

"IDEAL"
DIRECT-READING PHOTO-ELECTRIC
EXPOSURE METER

For properly exposed snaps everytime, you can't beat it! So simple, just aim the meter and read correct exposure instantly on patented, easy-to-read dial. Used by thousands of professionals and amateurs with Color or B&W film, still or movie.

with drop-front leather case $9.95
3 YEAR GUARANTEE

"IDEAL" For XMAS or GRADS!

"IDEAL"
PRECISION OPTICAL
RANGEFINDER

Perfect focus is a "must" for clear, sharp pictures. Simply aim, and turn the knob until double images become one, then read exact distance on dial. Has every desirable feature found on the most expensive rangefinders.

specify metric or feet scale $2.95
3 YEAR GUARANTEE

AT YOUR DEALER—OR SEND TO
FEDERAL INSTRUMENT CORP.
Dept. M-1 12-10 Broadway, L. I. City 6, N. Y.

THE MOST IMPORTANT CAMERA ACCESSORY!

A Quick-Set Tripod is the best means of assuring consistently sharp picture indoors and out—free from "tremor fuzz" and blur! Quick-Set's speedy elevation, wide-sweep crank control, all-angle pan head action and lightweight easy-to-adjust aluminum legs make any picture-taking an even greater pleasure.

THERE'S A NEWLY STYLED QUICK-SET TRIPOD

for every use and camera from $14.95 to $53.50!

FREE FAMOUS BOOKLET

Quick-Set's New Idea Booklet tells you how a tripod will help you take better pictures. Mail the coupon below and it's yours FREE!

QUICK-SET, INC.
8113 N. Central Pk., Skokie, Ill.

Please rush me a FREE copy of your new booklet on how to get better pictures with QUICK-SET Tripods.

Name .....

Address .....

City ..... Zone..... State.....

My Photo Dealer is.....

QUICK-SET, INC.
8115 N. CENTRAL PK., SKOKIE, ILL.

LENS EXTENSIONS

(*Continued from page 111*)

Contax Extension Tubes (*Germany*). Distr. Carl Zeiss Inc., 485 Fifth Ave., New York 17, N. Y. For Contax II, III, IIa, IIIa: 1x, $16; 2x, $19; 4x, $22.

Futura Close-up Focusing Rings (*Germany*). Distr. Futura Camera Corp. of America, 34 W. 20 St., New York 11, N. Y. Set of 3 rings. Range 37 in. to 15 in. Models for 45mm and 50mm Futura camera lenses. Each ring has engraved depth of field scale. Set $11.95.

GROUND GLASS DEVICES

Ditto 99 Close Up and Copying Device (*Germany*). Distr. Ditto Camera Corp., 527 Fifth Ave., New York 17, N. Y. For use with Ditto reproduction stand or may be mounted on tripod. Extension tubes furnished as accessories. For Ditto 99 camera, $25.80.

Stewartry Copying Attachment (*England*). Distr. Penn Camera Exchange, 126 W. 32 St., New York, N. Y. Models for Leica and Contax. Price either model $9.75. Arm to hold device on enlarger post, tripod, etc. $9.75.

Leitz Focaslide (*Germany*). Distr. E. Leitz Inc., 468 Fourth Ave., New York 16, N. Y. Sliding ground glass. Extension tubes and bellows supplied as accessories. For Leica cameras $36.

Nilscope (*U. S. A.*). Distr. Burke and James Inc., 321 S. Wabash Ave., Chicago 4, Ill. Sliding ground glass. Has built-in extension bellows. For Leica, Canon, Kardon, Leotax, Nicca, Tower $59.50.

Speed-O-Copy (*U.S.A.*). Distr. Shull-Meyer Co., 8681 Melrose Ave., Hollywood 46, Calif. Hinged ground glass. Special extension tubes supplied for each model. Model 140 for Argus C-2, C-3, $38.50. Model 180 for Argus 21, $38.50. Model 190 for Clarus, $38.50. Model 102 for Contax I, II, III, IIa, IIIa, $49.50. Model 150 for Kodak Ektra, $62.50. Model 101 for Leica, $38.50. Model 160 for Kardon, $38.50.

Contaprox (*Germany*). Distr. Carl Zeiss Inc., 485 Fifth Ave., New York 17, N. Y. Consists of focusing mount with built-in 50mm f/3.5 Zeiss Tessar lens, 1x extension tube, focusing screen adapter and focusing screen magnifier. All parts available separately. Complete outfit $134. Additional accessory (Focusing Revolver) permits picture taking without necessity of removing focusing screen. $47.

CAMERA GUIDE

Here is a listing of practically every American and foreign camera, movie and still, on the market today. It gives essential information such as lens, shutter, manufacturer or importer, list price, etc., in concise form, and you can have a copy by sending 50 cents right away (supply limited) to MODERN'S BOOK STORE, 251 4th AVE., N. Y. 10, N. Y.

8/8 mm SAVE MONEY & TIME 16 mm

BUY BULK FILM Process It Yourself!

SUPERIOR DELUXE CINE REEL

Everything needed to develop your film. Reel holds 100 ft. of 8/8 or 16mm film. Complete with tray and 100 ft. capacity drying rack. Full "Do It Yourself" Instructions. (Wt. 18 lbs.).....$22.50

MORSE G-3 TANK

for daylight developing of 8/8mm, 16mm or 35mm film. Tank holds 100 ft. Tank of acid-proof molded bakelite. All metal parts stainless steel. Light-tight cover. Automatic agitation. (Wt. 10 lbs.).....$28.50

DRYING RACK—100 ft. capacity. For use with Morse G-3 Tank. Compensates for shrinkage while drying. (Wt. 5 lbs.).....$7.50

REVERSAL CHEMICALS

Do it yourself! Process movie film with Superior's reversal processing powders. Complete with instructions. Nothing to add but water.
½ gal. set (Wt. 3 lbs.) $2.25
1 gal. set (Wt. 4 lbs.) $3.40

SUPERIOR BULK FILM

for big savings. No excise tax on bulk movie film! Superior bulk film is fresh, fine grain film made by DuPont.
Double 8mm 200 ft. $4.50
16mm 200 ft...3.85

ORDER NOW! SATISFACTION GUARANTEED
Send for new free Cine catalog and Processing Manual. Hundreds of bargains. All sold on unconditional money-back *guarantee*.

SUPERIOR BULK FILM COMPANY
HOME PROCESSING HEADQUARTERS
Dept. IMP 105 S. Wells St. Chicago 6, Ill.

GREATEST VIEWER VALUES IN HISTORY

LAMPCO

FEATURING SOLID OPTICAL GLASS LENSES AND PATENTED LIGHT COLLECTING SPHERE

- Shows Your Transparencies at Their Life-Like Best
- A Size To Fit All Your Viewing Needs

$2.98
LAMPCO GRANDVIEW STEREO VIEWER

The Grandview is a scientifically designed precision viewer that collects light from all angles, distributing it evenly on entire transparency. Image always in focus... even with eyeglasses. Money-back guarantee of satisfaction...you must be pleased.

LAMPCO GRANDVIEW 2¾ x 2¾ VIEWER For 2¼x2¼ Films $2.98

$1.25
LAMPCO GRANDVIEW 2 x 2 VIEWER

Buy at your local camera store or sent postpaid if cash with order.

LOS ANGELES MOLDED PRODUCTS CO.
11129 Chandler Blvd. • North Hollywood, Calif.

STUDY PHOTOGRAPHY
COMMERCIAL • PORTRAIT • ILLUSTRATIVE

Finest professional instruction and equipment. Co-educational. Attractive dormitory for girls. Living accommodations secured for men. Training under G.I. Bill 550. Entrance 1st Monday each month. WRITE OFFICE OF REGISTRAR, ROOM 341.

RAY-VOGUE
750 North Michigan Ave., Chicago 11

WHAT'S AHEAD?

by LLOYD E. VARDEN

Advances In Photography Reviewed At the International Conference on the Science and Applications of Photography

During September 1953 the Royal Photographic Society of Great Britain, as a part of its Centenary celebration, sponsored an international conference covering all phases of scientific and applied photography. Representatives from the leading research laboratories throughout the world gave papers on the most recent developments in photographic science and methods. Eventually the papers presented at the Centenary will be published in a special monograph, but I was fortunate enough to obtain in advance a set of pre-prints of all lectures, some of which I should like to review here.

New Sensitive Materials for Scientific Purposes

Dr. J. Sivadjian of the Pasteur Institute in Paris described certain types of new sensitive layers which allow numerous applications in physiology, meteorology, agriculture, chemistry, etc. The first of the new type layers is sensitive to light, but also to water (or humidity). These layers have some most unusual characteristics.

The layers are called *hygro-sensitive photochrome* layers. The reasons for this designation will become clear upon a description of how the layers are prepared and applied. To prepare such a layer, a film or plate having a silver bromide emulsion is immersed in a developer in a darkroom and is then taken into open white-light and allowed to develop fully. However, the fully developed emulsion is fixed in a regular hypo solution to remove any possible traces of undeveloped silver bromide. Following thorough washing, the emulsion is placed in a 3% solution of mercuric chloride in which the silver bleaches completely. It is then washed to eliminate the excess mercuric chloride solution and transferred to a ½% solution of potassium iodide. The concentration of the iodide solution is critical and should be held rigorously to ½%. In the iodide solution the emulsion changes in color and tones progressively to yellow. When toning is complete, a rapid rinse in water completes the treatment, except for final drying.

The thing that is accomplished in the above steps is to produce a double salt

(*Continued on page 114*)

NOW 'BUILT-IN METER' CONVENIENCE...

with the GOSSEN Sixti EXPOSURE METER

with Incident Light Adapter and Leather Case $23.95

No other meter has so many useful features as the Sixti, and in addition, the Sixti has this important advantage: it attaches to any camera equipped with an accessory clip. The Sixti is the perfect mate for the fine camera. It virtually becomes part of that camera, giving it all the convenience of a built-in light meter. No meter surpasses it for accuracy and long life performance.

Other features include: Easy One-Hand Operation — Multi-Lens, Honeycomb Louvres — Spring Suspended Bearings — and Natural Memory. There are no buttons to press, and no dials to calculate. The Leather Case attaches to the camera neck-strap for utmost convenience.

And you enjoy these advantages:

MEASURES INCIDENT AS WELL AS REFLECTED LIGHT

AUTOMATIC, DIRECT EXPOSURE READINGS

AUTOMATIC, HIGH-LOW SENSITIVITY SELECTION

Other Gossen Meters include: Dual SIXTOMAT and Dual SIXON

At Your Photo Dealer or write to PHOTOPTIC CORPORATION, 235 Fourth Ave., New York 3, N. Y.

NOW! PRESENTING THE NEW SOLARMATICS SEMI-AUTOMATIC ENLARGERS

FOR "FINGER-TIP" ENLARGING and TERRIFIC PERFORMANCE!

SOLARMATIC 120 — 35mm. to 2¼ x 3¼ in. SOLARMATIC 4 x 5 — 4 x 5 in. Negatives.

It's Here! SOLARMATIC the New Easy-to-use Enlarger with EFFORTLESS "Finger-tip" control! Silken S-m-o-o-t-h for INSTANT CHANGE of Image Size and FAST Needle-Sharp projection. SOLARMATIC'S Pace-setting features are as Modern as Tomorrow and stamp the New "Rock-Steady" SOLARMATIC (not an Autofocus) as America's TOP ENLARGER VALUE. • Quick Lens Interchange. • Camera Backs (Standard film size) for Speedy Copy work are valuable accessories. (See Inset.) • Exclusive Red "Non-Actinic" Baseboard. • Dustless Negative Carriers. • Enlarging Range to Full Mural Size . . . plus 55 other "most wanted" features. • *The New "Finger-Tip" SOLARMATIC has ENTHUSIASTICALLY passed intensive testing by Professionals and Photo-Finishers. Performance Beyond Expectations! FULLY GUARANTEED.*

Write for NEW SOLARMATIC story TODAY!

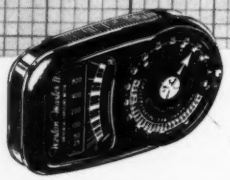
• SOLARMATIC 120 *(less lens and accessories)* ..... $ 99.50

• SOLARMATIC 4 x 5 *(less lens and accessories)* 132.50

BURKE & JAMES, INC. - 319 So. Wabash, Chicago 4, Ill.

Expose . . . Develop . . . Print . . .

WESTON measurements assure accuracy at every step!



WESTON Master II Universal Exposure Meter

Widely preferred because it gives complete exposure control in shooting color or monochrome, with all types of cameras. The meter for perfect transparencies and negatives. At all dealers.

WESTON Thermometer

Precision, stainless steel thermometer for the darkroom. Easy to read . . . resists breakage . . . resistant to all solutions . . . accurate to within 1° F. over entire scale. Fits tanks, trays, graduates. At all dealers.

WESTON Analyzer

An instrument for exact print control . . . a combination densitometer, illumination meter with accessories necessary for both black-and-white and color. Write for information.

2458

WESTON Electrical Instrument Corporation
614 Frelinghuysen Avenue, Newark 5, N. J.

WHAT'S AHEAD?

(*Continued from page 113*)

of mercury and silver within the thickness of the emulsion. This double salt is very stable and is insoluble in water. Even prolonged heating in boiling water or prolonged immersion of the emulsion (up to several weeks) in water at normal temperature does not change the yellow color of the salt, and none of it is lost by dissolution. However, the salt is sensitive to light, which causes a rapid change in color from yellow to a violet black when exposed. At this stage the most remarkable property of the layer can be demonstrated, because after exposure the emulsion is extremely sensitive to water and atmospheric humidity which restore the yellow color.

In practice, advantage of this unusual property can be taken in many ways. For example, if we expose the layer to light through a transparency a negative image is obtained from which a bromide paper print can be produced. This gives a very convenient way for making a paper print from a transparency. The layer can be used over and over since the negative image will eventually disappear due to the influence of atmospheric humidity.

An exposed emulsion can be put in contact with a moistened fabric or other textured material and immediately a pattern is produced which corresponds to the texture of the material very exactly.

Thermochromic Sensitive Layer

Another of the new-type sensitive layers is one that is extremely sensitive to heat. The layers depend upon the heat sensitivity of silver tetraiodomercurate, a canary yellow salt which can be prepared by mixing silver iodide and mercuric iodide in the presence of a small amount of ethyl alcohol. This salt is extremely sensitive to heat, changing to a brick red at 50°C, but reverting to its original yellow color upon cooling. This salt can be prepared from a hygro-sensitive photochrome emulsion by immersion in a hydrogen peroxide solution. The peroxide treatment causes the emulsion to lose much of its light sensitivity, but it does not change its color. However, when the treated emulsion is washed in water it loses its light sensitivity completely and becomes heat sensitive. This type of layer is used principally for scientific applications, such as demonstrating the heat effects of ultrasonic waves, but many other applications may occur to readers.

Vanadium Salts As Developers

Dr. L. J. Fortmiller and Dr. T. H. James of the Kodak Research Laboratories reported their recent investigations on the developing properties of vanadium salts. It is surprising that more use of vanadium salts has not been made in view of their long history

(*Continued on opposite page*)

indoor movies made easy with

Victor LIGHTS

Our instruction booklet on movie lighting FREE!

JAMES H. SMITH & SONS CORP.
Dept. C1 Griffith, Indiana

Perrin CALIFORNIA

Newest Leather Masterpiece!

PRO BAG 208

Fashioned of Fine Top Grain Cowhide Leather Especially For Exakta or Similar Cameras

Sold at better camera stores. Write for folder.

J. B. PERRIN & CO., Inc. · 8510 Warner Drive · Culver City, Calif.

ZEISS IKON Cameras

CARL ZEISS, INC., 485 FIFTH AVE., NEW YORK 17

"POCKET POWER PAK"

NOW... lightest most compact Electronic Photo Flash

WEIGHS ONLY 22 OZ.

• battery fits pocket
• less than 1c per flash

Write NOW for FREE booklet

CONTINENTAL ELECTRONICS CORP.

SLIDE PROJECTORS

(Continued from page 57)

Light from a slide projector should be directed at the screen, not into the eyes of the operator and the audience. Some projectors leak light in all directions. Turn on the projection lamp and examine the machine for light spill. Pay particular attention to the ventilating louvers in the top of the lamphouse. They should direct light and heat away from the operator. The filament of the projection lamp should not be visible from any angle.

Try the on-off switch. It should be readily accessible. If the switch is mounted on the body of the projector, operate the machine long enough to see that it does not overheat, or burnt fingers may result. This is no problem with blower-cooled types. Projectors with convection cooling get much hotter—frequently the switch is found out in the line cord, which incidentally should be at least 8 ft. long.

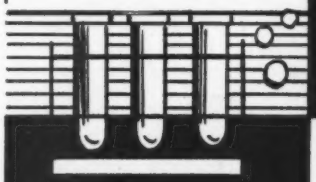
Some projectors have separate switches for lamp and blower. These should be wired so that the lamp will light only after the blower switch has been turned on. Other machines have one switch to turn on both lamp and blower. A third way is to have the blower directly connected to the line cord so that it starts as soon as the projector is plugged in.—THE END

---

and unique properties as photographic developers. The Lumière brothers reported as far back as 1894 that vanadium salts are energetic developers in strongly acid solution. However, not much investigative work appeared on vanadium salts until 1952 when P. Roman disclosed that a vanadous bromide developer would develop a normal motion picture positive film in 15 to 20 seconds to give the same characteristics as a metol-hydroquinone developer in 5 to 10 minutes.

A vanadous-type developer is of especial interest because it can be readily regenerated electrolytically. Moreover, Roman claimed that he obtained a substantial increase in emulsion speed with his vanadium developer over that obtained by normal development in a regular metol-hydroquinone developer. However, Fortmiller and James state that this speed increase could very likely be caused by the acidity of the developer rather than by any special property of the developing agent. They obtained a similar increase in emulsion speed with a metol-hydroquinone developer when the emulsion was pre-treated in a weak solution of sulfuric acid, washed, and then developed. It might be added that the acid-latensification reported by Fortmiller and James is not unlike that reported by Bates and Mueller some years back who used acetic acid vapors or similar acid vapors for increasing effective film speed.—THE END

48 HOUR SERVICE FOR COLOR PRINTS on our premises—if required.



COLOR PRINTS

From Any Size KODACHROME ANSCO or EKTACHROME

2x (2¼ x 3¼)....20¢ ea. 9 for 1.65
(From 35mm Slides Only)
3x (3¼ x 4).....37¢ ea. 6 for 1.90
4x (4 x 5).....50¢ ea. 5 for 1.90
5x (5 x 7).....90¢ ea. 3 for 2.25
8x (8 x 10)....1.59 ea. 3 for 4.19

ALL PRINTS DONE ON NEW IMPROVED ANSCO PRINTON!!

IF YOU VALUE YOUR COLOR FILMS ...USE PORIUM TO PRESERVE

YOUR FILMS FOREVER!!

Be sure that your film receives the new PORIUM TREATMENT. All films developed (at PANORAM LABS) receive the PORIUM TREATMENT automatically to insure indefinite life and freedom from damage against scratches and finger marks, due to handling, packaging and projection. PORIUM TREATMENT is the result of a series of tests (of trial and error) over a period of ten years and is now brought to you at no extra cost—exclusively at PANORAM.

NO OTHER LAB CAN MAKE THIS OFFER!!

EXCLUSIVE COLOR PRINTS AND PROCESSING!!!

20 Exp. 35mm Roll Ansco processed with Automatic Mounts
...1.00 ea., 2 for 1.60, 3 or more .70 ea.
120 size Ansco processed
...1.00 ea., 2 for 1.60, 3 or more .70 ea.

120 EKTACHROME ... 1.00 PER ROLL

PROMPT SPEEDY SERVICE

35mm FAITHFUL COLOR DUPLICATES { 8 for 1.00 / 20 for $2.00

SPECIAL MULTIPLE PRINT PRICES!

EXTRA-LOW PRICES ON ENLARGEMENTS

When ordering many from one slide, prices for each indicated under specified quantities, and no additional discount allowable unless specifically inquired about.

QUANTITIES	6	16	18	32	36	48	54	64	72	80
Wallets (1 15/16 x 2 5/16)		.14		.13		.12		.11		.10
2X (2¼ x 3¼)			.15		.14½		.14		.13	
3X (3¼ x 4)			.25		.24		.23		.22	
4X (4 x 5)			.35		.34		.33		.32	
5X (5 x 7)	.70		.68		.66		.63		.60	
8X (8 x 10)	1.35		1.25		1.20		1.10		1.05	

NOTE: Inquiries on large quantity duplication solicited. On all orders of 15.00 an additional discount of 5% may be deducted. On all orders of 25.00 or over a discount of 10% may be deducted. Except on special multiple print prices.

Minimum Order 1.00 (No C. O. D.'s)

PANORAM FILM LABS
1190 6th. Avenue New York 19

35mm PHOTOGRAPHY

NEW — COMPLETE WORKING HANDBOOK ON MINIATURE CAMERA PHOTOGRAPHY

By JACOB DESCHIN. Gives complete instruction in camera operation and working techniques for both Range-Finder and Reflex types of 35mm cameras. Here is a package of information, guidance and inspiration that describes 35mm photography as it is practised today by serious workers.

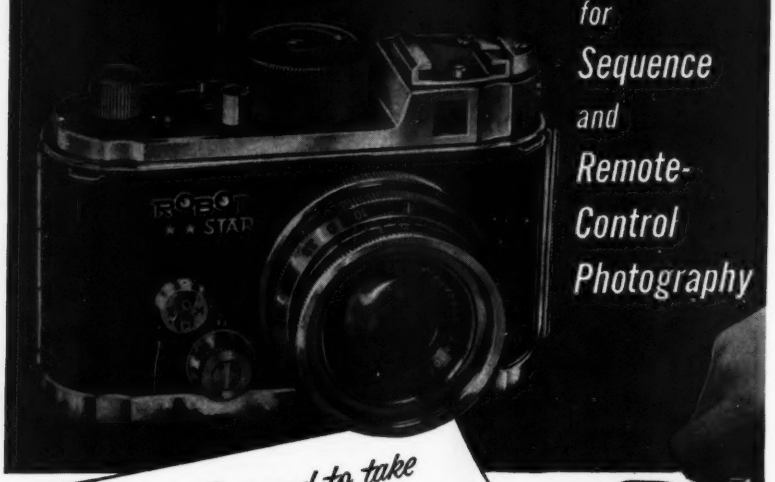
55 top-notch 35mm photographers show their best work—so you see what 35mm photography can do. The unique qualities of 35mm cameras are made crystal clear so the reader is able to utilize their full potentialities.

FROM YOUR DEALER OR,

Camera Craft Pub. Co.
95-M Minna St., San Francisco 5, California

A unique book for people who want to be truly "grown up" photographers. 192 pages of real help for all.....$5.00

ROBOT
★★ Star
Motorized
for
Sequence
and
Remote-
Control
Photography



Now Equipped to take
Standard 35MM. Cartridges

You wind Robot-Star's built-in motor like a watch—then take up to 24 shots—singly or in rapid-fire sequence.' When you press the button, motor automatically resets shutter and moves film for the next shot . . .

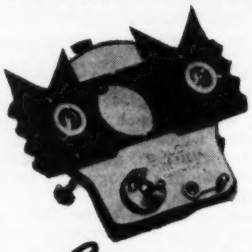
Zone-focusing assures sharp definition over a wide area. Robot-Star operated by remote control release opens new fields for photography in industry and science . . .

Robot-Star Cameras equipped with interchangeable Schneider lenses retail from $217.50

Write for Informative Booklet M.

INTERCONTINENTAL MARKETING CORP.
251 Fourth Avenue, New York 10, N. Y.

BE PROFESSIONAL WITH CONWAY'S
BOLSEY FADER



Creates a variety of effects on movie film. Fade-in. Fade-out. Overlap (lap dissolves) also possible. 64 different basic combinations. Fully automatic. Fits almost every movie camera made.

SAVE 33%
List Price $22.50
Sale Price While They Last
$14.95 Postpaid

Conway CAMERA CO.
4 Famous Stores for Fine Cameras
34 N. Clark Street Dept. MP-154 Chicago 2, Illinois

modern STEREO

by BART BROOKS

What's wrong with professional 3D movies? Poor scripts plus slipshod techniques may kill them before they get a chance to prove themselves.

We've all been exposed to Hollywood-made stereo movies by now. Few viewers will claim they have been visually or aesthetically successful. The reasons why seem to be a mixture of unfortunate technical mishaps and slipshod presentation. Since professional 3D development has a direct bearing on home stereo equipment, this bears examination.

Among the most common technical faults of 3D movies are a few beyond the producer's ability to control. Let's take, for example, "out-of-sync" operating of the two projectors.

Projection errors

As you know, two films are used, each made with a separate camera representing the left or right eye view of the subject. When the two strips of film are projected, each frame of one strip has a companion frame on the other strip. Both must be projected on the screen simultaneously. Accidents, however, do occur in projection booths and films break, necessitating splicing. Splicing means the loss of one or more frames. Unless the same frames are cut from the other unbroken reel also, the reels can never be in sync with each other. And it's extremely difficult to match frames when a reel breaks, because the unbroken film continues to run some distance before it is stopped.

A second difficulty with which the projectionist must cope is the horizontal spacing of the two images on the screen. Often this spacing goes awry, and the eyes of the audience go hurtling in opposite directions vainly attempting to follow their individual images.

A third projection headache is vertical lag—one image being slightly higher than the other. This causes one eye to attempt to look up while the other looks down. They can't do it, unfortunately, so eyestrain quickly results. In addition, the movie cannot be seen properly.

These three difficulties are in the hands of the projectionist. If he is a careful workman, splices all films carefully and watches the screen continuously for proper image placement, they can be overcome swiftly. Unfortunately the very nature of his job—projecting the same film over and over

Best Film Values Under the Sun
8 mm • 16 mm • 35 mm

SOLAR-COLOR FILM
Available in two types: outdoor (for daylight) and indoor (for artificial light). Specify when ordering.
Dbl. 8 mm spool.....$2.95 ea. 3 or more....$2.75 ea.
*16 mm 100 ft. spool....$7.98 ea. 3 or more....$7.65 ea.
16 mm 50 ft. magazine..$4.95 ea. 3 or more....$4.49 ea.

SOLAR Black and White Film
TYPE 12 A favorite with economy-wise movie makers for many years. The best low-cost film on the market. Non-halo, ortho ASA 16 Daylight.
Dbl. 8 mm 25 ft. spool..$1.59 ea. 3 or more....$1.49 ea.
*16 mm 100 ft. spool....$3.25 ea. 3 or more....$2.95 ea.
16 mm 50 ft. magazine..$2.59 ea. 3 or more....$2.25 ea.

TYPE 24 A medium speed full panchromatic film. Fine grain, non-halo, none better on the market . . . supreme in picture quality ASA 32 daylight 20 tungsten.
Dbl. 8mm 25 ft. spool..$1.89 ea. 3 or more....$1.75 ea.
*16 mm 100 ft. spool....$4.95 ea. 3 or more....$4.50 ea.
16 mm 50 ft. magazine..$3.59 ea. 3 or more....$3.25 ea.

THE NEW TYPE 200 The fastest film on the market! Used by professional news and TV cameramen for several months. For sports, theatres, night pictures, indoor pictures of all kinds . . . If you have been having trouble with any difficult light set-up, try Solar Type 200 . . . you'll be thrilled! ASA 250 daylight, 160 tungsten.
Dbl. 8 mm 25 ft. spool..$2.79 ea. 3 or more....$2.49 ea.
*16 mm 100 ft. spool....$6.29 ea. 3 or more....$5.65 ea.
16 mm 50 ft. magazine..$4.75 ea. 3 or more....$4.35 ea.

*Available single perf. for sound.
All movie types available in bulk.
Write for "Bulk Film Bulletin".

Why pay high prices when you can get the results you want at Solar's low mail-order prices? Order now and save! Film Specialists since 1937!

ALL PRICES INCLUDE SOLAR'S FAMOUS FAST 48 HOUR PROCESSING SERVICE!
Illinois customers add 2% sales tax.

SOLAR CINE PRODUCTS, INC.
4247 South Kedzie Chicago 32, Ill.

GADGETLESS? - - - - - YES!!
"Winpro 35mm"
SYNCHRO FLASH CAMERA
AT YOUR PHOTOGRAPHIC DEALERS NOW
ZENITH FILM CORP. • ROCHESTER 2, N. Y.

accept no substitutes for . . .
EdnaLite FILTERS
solid optical glass . . .
coated both sides . . .
duraklad rimmed . . .
lifetime guaranteed

Print at Home
Cards, Stationery, Advertising, labels, circulars, church work, tags, titles, etc. Raised printing like engraving, too. Save money. **Print for Others. Good Profit. Have a home print shop.** Sold direct from factory only. Easy rule sent. Pays for itself in short time. We supply everything. Write for free catalog of outfits and all details.
KELSEY PRESSES, X-14, Meriden, Conn.

VACUUMATE
FILM PROTECTIVE PROCESS
The SUPER VAPORATE
PROTECTS AGAINST Scratches, Fingermarks, Oil, Water and Climatic Changes
ONE TREATMENT LASTS THE LIFE OF THE FILM
Brittle Film Rejuvenated.
LABORATORIES IN KEY CITIES THRUOUT U.S.
Write for Information Now
VACUUMATE CORP., 446 W. 43rd ST., N. Y.

again—perhaps for weeks, makes him less than a constant observer of what's going on. Most likely when a difficulty does arrive, the projectionist is busy reading a book or out for a smoke.

Poor glasses

But probably the most common fault of all is the theater operator's lack of interest or knowledge about the polarizing glasses through which the stereo movies must be viewed. Polarized glasses, as manufactured by two companies, transmit about 37 to 40 percent of the light. Further light loss occurs at the screen surface where the light is reflected, and at the projector where a set of polarized filters must be used in front of each image to be projected. A lower than normal picture light level is the net result.

Losing the stereo effect

It isn't hard to sell an uninformed theater owner on polarizing glasses that give a brighter image than other makes. So bright is the image, in fact, that the polarizing material fails to cancel out the unwanted image and we thus see both images with both eyes. The stereo illusion is lost. In addition, the ghost images are tiring on the eyes.

I recently had occasion to give a stereo demonstration before a camera club. I had supplied my audience with polarizing glasses obtained from and used by one of the largest national chains of theaters. The viewers—more observant that the usual theater audience—informed me that they could not see any stereo image. Instead they saw double images. A quick check revealed that the glasses were transmitting too much light.

This then is the condition of professional stereo movies today.

Even if a well-made stereo picture does reach your neighborhood theater, the chances of it getting an adequate showing are slim. Meanwhile the wide screen processes—no glasses, one projector, no new filming techniques—are gaining popularity. And you can hardly blame the long suffering audiences for preferring it.—THE END.

Get More PROFIT and PLEASURE *from* **PHOTOGRAPHY**
IMPROVE YOUR SKILL
Study AT HOME
LAY FOUNDATION FOR A CAREER!

Whether you wish to make a career of photography or want to gain additional skill as an amateur, the American School of Photography offers practical basic training which requires only spare time study at home.

With proper aptitude and application, this course should provide you with a fundamental background which may open the door to valuable professional experience . . . or add fascination and zest to your hobby.

OLD ESTABLISHED SCHOOL. Backed by years of experience, our training covers every phase of Modern Photography through spare time study at home. Basic photographic principles are taught by inspiring "learn-by-doing" method, step-by-step, under the supervision of a qualified instructor.

GET FREE BOOKLET! Send coupon today for free booklet, "Opportunities in Modern Photography," and full particulars.

AMERICAN SCHOOL OF PHOTOGRAPHY
835 Diversey Parkway, Dept. 1941, Chicago 14, Ill.

AMERICAN SCHOOL OF PHOTOGRAPHY
835 Diversey Parkway, Dept. 1941, Chicago 14, Ill.
Please send me without obligation your free booklet, "Opportunities in Modern Photography," and full particulars. No salesman will call.
Name.....
Address.....
City.....Zone.....State.....

RECORDS MOOD MUSIC
Last Word in Sound Effects — Background SOUND
Send For Free Catalogue
THOMAS J. VALENTINO, Inc.
Dept. MP
150 West 46th St., New York 36, N. Y.

ZEPHYR
QUALITY CASES
Produced by **MILLS AFFILIATES**
1606 Main Street—Kansas City, Missouri

***Mamiya Cameras**
*Preferred for *Quality*
FIND OUT WHY . . . . . .
Write for Booklet MP41
Mamiya Camera Company of America, Inc.
82 Wall Street, New York 5, N. Y.

New C-O-C
B-C POCKET FLASH
TO FIT EVERY CAMERA
Write for FREE CATALOG
CAMERA OPTICS MFG. CORP.
101 W. 47th St., New York City

PHOTO MART . . .

HEADQUARTERS FOR

CONTAX

CONTAX IIA

LATEST MODEL, built-in flash synch., 1 sec.-1/1000, self-timer, latest model, ctd. Sonnar f:2 lens.

List $353.00
SPECIAL $199.50

CONTAX IIIA

LATEST MODEL, built-in flash synch., 1 sec.-1/1250, built-in exposure meter, self-timer, ctd., Sonnar f:1.5 lens.

List $417.00
SPECIAL $269.50

Write for Complete NEW Bargain Price List on Imported & Domestic cameras.

IMPORT HEADQUARTERS — TRADES ACCEPTED

GRAND CENTRAL CAMERA 1 East 43rd St. New York 17

HEADQUARTERS FOR

CONTAX-D

5-YEAR SERVICE

Improved shutter to 1/1000th, built-in flash outlet top-of-camera. Self-timer, interchangeable lenses. Prismascope, Zeiss Biotar f:2 ctd. Pre Set

World's finest eye-level Reflex! Newest Zeiss 35mm achievement! Precision prismatic finder sees image upright - no parallax - extremely large view through your Zeiss lens. Over 50% OFF!

List $460.00

SALE $189.50

Write for Complete Price List on Lenses & Accessories for Contax-S, Contax-D, Pentacon & Praktica Cameras. Also All Imported & Domestic Cameras, Projectors, etc.

GRAND CENTRAL CAMERA 1 East 43rd St. New York 17

DYE-TRANSFER COLOR PRINTS

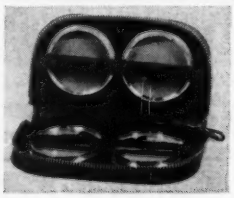
If your film is worth enlarging . . . it is worth a "DYE-TRANSFER" print!

* * *

The finest color-print enlargements from your own favorite, any size or make, color film or positive transparencies.

5" x 7" Color Prints . . . $3.00 per print.
Duplicates of same 5" x 7" print, $1.50.
Also 8" x 10" Color Prints available.
Write for complete price list, or send film.

Rochester PHOTO COLOR
BOX 1623 · ROCHESTER, N.Y.



FILTER CASES

Series No. 5 $2.25

Series No. 6 $2.55

Prepaid

Made from fine leather — velvetine lined — with zipper. Takes four filters, fully protected.

No COD. Send check or money order to:

TECH P. O. Box 6425 Cleveland 13, Ohio

MODERNIZE . . . GET UP TO DATE!

Trade your old cameras and lenses for 1954 MODELS

YOU GET	YOU TRADE YOUR	YOUR LOW COST
1. Leica 3f	for Leica 3c	$ 78.00
2. Leica 3f	for Leica 3a or G	109.00
3. Contax 2a	for Contax 2 or 3	99.00
4. Contax 3a	for Contax 2 or 3	129.00
5. Contax D	for Contax S	59.00
6. Kine Exakta VX	for Kine Exakta 1, 2, V	very low
7. Pre-set lenses	for non Pre set	39.00

We trade everything. What have you got? What do you want?

WALL ST. CAMERA EXCH. 80 Wall St. New York 5, N.Y. Dept. M14

FREE!! Our bargain catalog

FINISHED LIKE FINE PORCELAIN

CHINACOLOR

PRINTS — WALLET SIZE 2½ x 3½ — Now 25¢

MOUNTED

3x4	65c
3¼x4½	75c
4x5	90c
5x7	1.75
8x10	3.00

DUPLICATE COLORSLIDES From 35mm 25c

ANSCO COLOR FILM DEVELOPED, 120-620, 35mm $1.00 ROLL

UNMOUNTED

Wallet & 2X Sq	25c
3x4	55c
4x5	75c
5x7	1.50
8x10	2.75

3 DAY SERVICE — MINIMUM ORDER $1.00

CHINACOLOR LABORATORIES

Dept. 418, 715 Kennedy St. N.W., Washington 11, D.C.

JEN-DIP SAVES YOU $16.00 !

$1.50 With beaker

Coats 400 lamps

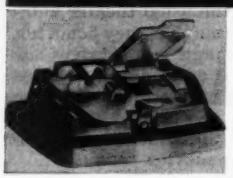
By dipping your own bulbs in Jen-Dip *Blue Label*, you get better color shots with daylight color film, indoors or out, better results than when you use factory blue bulbs or flash-shields.

Write for booklet MP-9

JEN PRODUCTS SALES CO.

419 W. 42 St., N.Y. 18, N.Y.

Hollywood STAINLESS STEEL Splicers



AUTOMAT only $7.95

HOT SPLICE only $14.95

(Free descriptive literature on request)

10 day money back guarantee order at your local camera store or

SCHOEN PRODUCTS
15029 S. Figueroa, GARDENA, CALIF.

THE NEW

CVD BATTERY TESTER

AS NECESSARY AS AN EXPOSURE METER

IT'S QUICK IT'S EASY

WITH THE CVD BATTERY TESTER

ONLY $5.95

CVD COMPANY
516 FULLER - HELENA, MONTANA

FREE CATALOG

36 Pages—Largest Assortment
PHOTO FRAMES • MOUNTS • ALBUMS and MAILERS

WRITE TODAY! Fastest Service! Lowest Prices!

INTERNATIONAL SALES CO. Dept. MP
414 E. Baltimore St. • Baltimore 2, Maryland

FAST SERVICE

INDIVIDUAL POCKET ALBUMS
WRITE FOR FREE MAILERS AND PRICE LIST

36 EXP. 35mm. FILM--
FINE GRAIN DEVELOPED
PRINTED 3¼ x 4½" -- 1.50
REPRINTS -- 4c each

35mm. FILM PRINTED 3¼ x 4½ $1.00 20 EXPOSURES

PRINTED OVERSIZE
8 EXP. ROLLS - 35c
12 EXP. ROLLS - 55c
16 EXP. ROLLS - 65c

PM. Photo Company
BOX 1402, KINGSTON, PA.

TAKE PORTRAITS using the HOME PORTRAIT METER

Get professional results every time with any camera. Money back guarantee.

$4.95

Send for free leaflet today.

KANCO PHOTO CORP.
30 W. 31st Street, New York 1, New York

P&J COLOR PRINTS

8x10 - $1.50 EA.

From ½ 35mm to 4x5 Trans.

COLOR PRINTS

2¼x3¼	25c ea.
3¼x4½	50c ea.
4x5	75c ea.
5x7	$1.00 ea.
11x14	$4.75 ea.

COLOR FILM PROCESSING

20 exposure (mounted) 35mm 120-620 Ansco & Ektachrome $1.00 Roll

35mm Slide Duplicating 25c ea. Mtd.
Minimum Order $2.00, No C.O.D.

P & J COLOR PRINTS
P.O. BOX 8575 • COLE BRANCH • LOS ANGELES

---

now title movies in SECONDS*

Self sticking CLINGTITE LETTERS stick on contact with glass, metal and all non-porous surfaces. No glue or adhesives! Letters re-usable! Title on location; thru car window with subject as background; on mirror for 3-dimensional effect. Complete kit consists of 157 letters, numerals, figures; two title boards, 6-page idea booklet.

TITLING MADE EASY

* with self-sticking CLINGTITE LETTERS

FREE OFFER: See how CLINGTITE LETTERS simplify titling. Write today for free samples and 6-page idea booklet. Send postcard with name and address, no obligation. At leading dealers everywhere $2.95

CLINGTITE letters
4844 S. Ashland, Dept. M4, Chicago 9, Ill.

FLASHBULBS 35% Off

Bulb #	CASE QTY.	LIST	YOU PAY
#5	120	15.60	10.14
#SM	120	16.80	10.92
#11	120	18.00	11.70

All bulbs guaranteed at two for one. 35% off in case quantities. Shipped prepaid. Send check or money order only.

MERIT PHOTO SHOP
550-8th Ave. N. Y. 18, N. Y.

PHOTO MART . . .

NO ENLARGER AT ANY PRICE WILL MAKE BETTER PRINTS

NEW MERIT FOTOLARGER $19.95 LIST
35MM TO 2¼x3¼
★ BELLOWS
★ FRICTION FOCUSING
★ ROTATING NEGATIVE CARRIER
COMPLETE WITH ACHROMATIC F6.9 LENS WITH STOPS $23.95 LIST
Write for Free 24 page Catalog
TESTRITE INSTRUMENT CO. INC. NYC 3, N.Y.

ENLARGER KIT

Complete kit with which to start on the right road to perfect enlargements. Contains trays, paper, chemicals, easel, etc.

TESTRITE INST. CO., Inc.
NEW YORK 3, N. Y.

NO ENLARGER AT ANY PRICE WILL MAKE BETTER PRINTS

CHROME DE LUXE MODEL D $29.95
35 MM TO 2¼ x 3¼
MODEL 100 DC
(WITH COUNTERBALANCE)
35 MM TO 4x5 59.95
FOTOLARGER
Write for Free 24-Page Catalog
TESTRITE INSTRUMENT CO., INC.,
NYC 3, N.Y.

COLOR PRINTS

The best color at popular prices

2¼x3¼	25c	4x5	50c
3¼x3¼	40c	5x7	1.00
8x10	2.00		

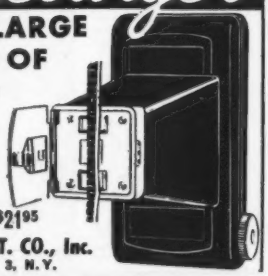
Minimum order $1.00

75c SPECIAL
Develop Anseo & Ektachrome rolls 620, 120, 20 exposure 35mm

LAKE COLOR
Box 6868 West Palm Beach, Fla.

Cinélarger

MAKE LARGE PRINTS OF
8mm 16mm MOVIES
$18.95
For 35MM Kodachrome $21.95



TESTRITE INST. CO., Inc.
N.Y.C. 3, N.Y.

New Low Prices
COLOR PRINTS 20¢
2¼x3¼....25¢ (any ten 20¢ ea.) square 120-620 film will be made 2¼x2¼

3x4	40¢	5x7	$1.25
4x5	60¢	8x10	$2.25

24 hr. Film Developing $1.00
Anseo or Ektachrome Sizes 35mm (in Slide Mounts) B2 or 120, PB20 or 620

35mm DUPES at 20¢ per slide
Minimum Order $1.00 Include Postage

Washington Color Photo
P.O. Box 1605 Washington 13, D. C.

MOVIES ON APPROVAL

Most entertaining **8MM MOVIE FILMS** for home movie shows. Write today and we'll SEND YOU A 50 ft. 8MM FILM — POSTPAID — **ON APPROVAL.** (Return the film within 5 days without obligation, if it's not worth more than the **$1.50** we ask.)

MOVIE-OF-THE-MONTH
6516-U Selma Ave., Hollywood 28, California

New! GEAR DRIVE ELEVATING ACTION TRIPOD

NO. 2500
2 SECTION $19.95
3 SECTION $22.95

The Only Tripod With Gear Elevating Action & Ratchet To Prevent Camera From Falling

★ LIGHTWEIGHT ALUMINUM
★ POSITIVE RACK & PINION DRIVE
★ SINGLE LOCK PANHEAD
★ LOCK PROOF LEG

WRITE FOR FREE LITERATURE
TESTRITE INSTRUMENT CO. INC. N.Y.C. 3, N.Y.

Movie DUPLICATES

* from your films
KODACHROME COLOR or BLACK & WHITE
Protect your valuable originals from projector damage and wear, run duplicate prints.
Duplicate prints make wonderful gifts.
8mm or 16mm . . Duplicates . . . . . 11c per ft.
8mm Enlarged to 16mm, or 16mm Reduced to 8mm . . . . . 14c per finished foot
* Mail us your original films with cash, check or money order, and we guarantee the BEST duplicates possible. QUICK SERVICE, TOP VALUE, SATISFACTION. Minimum Order $3.00

Hollywood MOVIE LABS. Dept. M
12522 Ventura Blvd., Studio City, California

8 X 10 COLOR PRINTS $2.00

All Orders Returned 1st Class

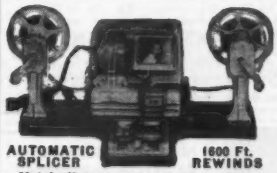
ANSCO COLOR & EKTACHROME ROLLS PROCESSED 120, 620, AND 35MM (Mfd.) $1.00. 35MM DUPLICATES, 20c EA.

NO C.O.D.'S—MINIMUM ORDER $1.00
Lo-PRICE COLOR PRINTS

2¼x3¼....30c	3x4½....50c	4x5....75c	5x7....$1.25
3 x 3....40c			8x10....$2.00

ACME COLOR PHOTO LAB.
Box 3004-M Linden Hills Station, Minneapolis, Minn.

MANSFIELD'S GREAT, NEW ACTION EDITOR



PRICE COMPLETE
only $39.95 for 8mm
$44.50 for 16mm

AUTOMATIC SPLICER
1600 Ft. REWINDS

- Metal all die cast constructed viewer
- Picture screen 2½" x 3½" • Glass Prism Shutter
- America's Lowest Priced Action Editor

If Your Dealer Can't Supply, Write Direct—
MANSFIELD INDUSTRIES, INC. Dep't M
1227 LOYOLA AVE., CHICAGO 26, ILL.

ASKANIA RANGE-FINDER

- Shock-Proof, chromium plated
- Quick and easy setting
- Color contrasts in the combined image
- Unvarying high accuracy of measuring

Price—$6.00 prepaid. No COD.
Send check or money order to:

TECH P. O. Box 6425 Cleveland 13, Ohio

"Tex & Bello Series"

35mm SLIDE **TITLES** in COLOR!
set of FOUR **$1.50**
TB1. Here We Go!
TB2. Wait'll see next one.
TB3. Short Intermission.
TB4. This is the End.
Spec. Xmas Carol Slides
FREE LIST!!
See your dealer or write direct. Sorry, no C O D's
TITLE SLIDES, 1440 Broadway, N. Y. 18, N. Y.

NUMBÅTABS

COLOR SLIDE INDEX TABS IN RED, GREEN, BLUE, ORANGE, BLACK. PLEASE SPECIFY COLOR.
NUMBERED • SELF-STICKING • LAST FOREVER
AT YOUR DEALER OR SEND 25c FOR PKG. OF 100 PPD.
The SAUNDERS Co. ROCHESTER NEW YORK

TRANSPARENT MIRRORS

"See without being seen" "Photograph People Unawares"
Used by F.B.I. to observe and photograph people without their knowledge. From one side it's transparent as glass. From other side it's like an ordinary mirror.
6"x6" size.....$5.00 12"x12".....$11.00
Other sizes upon request.

WALL ST. CAMERA EXCH.
80 Wall St. New York 5, N. Y.
FREE!! *Our bargain catalog.* Dept. M14

PHOTO MART...

STEDCO COLOR PRINTS

24-HOUR PROCESSING
COLOR FILM AND PRINTON
New Ansco Approved Type Vane Agitation Equipment
ROLL FILM 120 & 620 **$1.10** ROLL
35mm (20 exp.) mounted

COLOR SLIDE DUPLICATING EA.
35mm Kodachrome & Ansco Color mounted **20c**
Dealer Inquiries Invited

COLOR PRINTS
2¼x3¼ ..... 40c ea.
3½x4½ ..... 75c ea.
4x5 ..... $1.00 ea.
5x7 ..... 1.75 ea.
8x10 ..... 3.00 ea.
11x14 ..... 7.00 ea.
Min. Order $1.00
No C.O.D.

YOrk 0658
STEDCO PHOTO 7669 Melrose, Los Angeles 46 Calif

35mm Custom Quality FINISHING

KODAK ALBUM PRINTS
36 EXP. ROLL
$1.50

Our nation-wide service, specializing in custom quality 35mm. finishing (since 1939) guarantees you:
Fine Work Done by Experts—Quality Materials—Individual Film Processing and Prompt Service.
35mm ROLLS fine-grain developed and enlarged to 3¼" x 4½".
KODAK ALBUM PRINTS IN NEAT FOLDER
36 EXPOSURES—$1.50
20 EXPOSURES—$1.00
REPRINTS—5c EACH
Developing, printing and enlarging of 8, 12, 16-exposure rolls and other sizes at equally low prices.
FAST SERVICE! All work completed and returned Via First Class Mail within 24 hours. Write for FREE Mailing Bag and Price List, or send roll and money today.

FORMERLY MINIPIX LABS. BOX 973, DEPT **CAPITOL PHOTO CO.** CLEARWATER, FLA.

20 EXPOSURE 35MM. RELOADED CARTRIDGES 30¢

SUPER XX | **PLUS X** | **DUPONT #2**
20 EXP.....30c Ea. 36 EXP.....50c Ea.
Bulk: $4.25 per 100 ft. — $2.25 per 50 ft.

ANSCO COLOR RELOADS
20 Exp. Daylight or Tungsten (A.S.A. 12) $1.50 Ea.

All fresh, clean safety film. Satisfaction guaranteed or money back. Please include 10c extra per order to cover postage and packing.

EASTERN PHOTO LABS, Dept. "B"
1405 N. Charles St. Baltimore 1, Md.

PRISM VIEWFINDER for EXACTA

"PROFLEX" BELLOWS EXTENSION

for KINE-EXACTA, LEICA and PRAKTICA
now available at your dealer

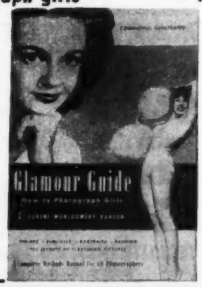
- Special Penta Prism offers direct vision of object with camera held at eye-level. **$39.95**
- Proflex Bellows extends up to 155mm., folds compactly to the size of cigarette pack. **$29.95**

Precision made in Western Germany by famed Sperling Works.

At your dealer or write—
KINE CAMERA CO. 11 W. 20th Street New York 11, N. Y.

GLAMOUR GUIDE. . . how to photograph girls

by Eugene M. Hanson—Whether amateur or professional, you can profit from Hanson's tips on how to make pictures to flatter the girl in front of your camera. Please her by studying the techniques described, the lighting diagrams and the 100 photographs presented in this volume, then applying them to your own work. 210 pages. 7 x 10, cloth. $5.00



American Photographic Book Pub. Co., Inc.
251 Fourth Ave., N. Y. 10, N.Y.
(Add 3% sales tax for New York City delivery)

Sunset COLOR LAB — COLOR PRINTS

5 x 7 COLOR PRINTS (from 35mm only) **85c** ea.

Color Prints from any size transparency
2¼ x 3¼ 25c
3¼ x 4½ 50c
5 x 7 ..... $1.00
8 x 10 ..... $2.00
Color Slide Duplicating.....25c ea.

COLOR PRINTS 11x14 . . 4.50 ea.
COLOR PROCESSING 35mm-20 exp. 120-620..... **$1.00** ROLL
Min. Order 1.50—No C.O.D.

SUNSET COLOR LAB.
P.O. BOX 8595 • LOS ANGELES 46 CALIFORNIA

COLOR PRINTS From Your Transparencies

Electronically controlled for superb results. Rapid service and satisfaction guaranteed.
Prints from any size transparency:
ANSCO COLOR
KODACHROME
EKTACHROME

25c 2¼ x 3¼

4 x 5	5 x 7	8 x 10
50c	$1	$2

Min. order $1. No C.O.D.'s
PROCESSING: ANSCO & EKTACHROME Roll Film
24 hours—120-620, 35mm, 20 ex. mtd. Only $1.00 roll
COLORFAX LABORATORIES
Dept. M-14, Box 3521, Georgetown Sta., Wash. 7, D. C.

35 mm. 20 EXPOSURES $1.00 PRINTED 3¼" x 4½"

24-HOUR SERVICE
- Album Snapshots -
36 EXPOSURES - 35MM. FILM-FINE GRAIN
DEVELOPED AND PRINTED - 3¼" x 4½" $1.50
8 EXPOSURE ROLLS - 45¢
12 EXPOSURE ROLLS - 65¢
16 EXPOSURE ROLLS - 75¢
DEVELOPED AND PRINTED OVERSIZE
REPRINTS 5¢ EACH
Write for Mailing Bags and Latest Price Lists

GRAPHIC PHOTO SERVICE
P. O. BOX 72, WILKES-BARRE, PA.

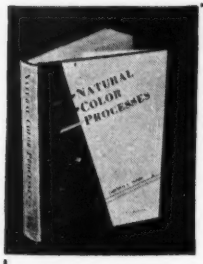
FINEST IMPORTED german FILM

Perutz

35 MM. FILM IN MAGAZINES,
IN BULK 55 FEET AND 100 FEET,
ROLLFILM "120" AND "620."
12 ASA 40 ASA 100 ASA
Send for descriptive folder.

TECH P. O. Box 6425 Cleveland 13, Ohio

NATURAL COLOR PROCESSES



by Carlton E. Dunn—Fifth edition. This classic text of complete coverage on every photo-color process in use today gives the working photographer the guidance he needs to get the most out of every color undertaking. Tells how to take them, process them and correct them. 286 pages, 5½x8, cloth. $5.00

American Photographic Book Pub. Co., Inc.
251 Fourth Ave. New York 10, N. Y.
(Add 3% sales tax for New York City delivery)

EKTACHROME & ANSCO COLOR PROCESSING

120, 620, 35mm MTD.....$1.00
Sheets 4 x 5—50c, 3¼ x 4¼—45c, 2¼ x 3¼—35c
INCLUDE RETURN POSTAGE ON ALL ORDERS
DYE TRANSFER PRINTS
INDIVIDUALLY MADE—COMPLETE MASKING
PRICE LIST ON REQUEST
CUSTOMCRAFT COLOR SERVICE
P.O. Box 6618, Dept. MP, Wash. 9, D.C.

MODERNIZE YOUR CAMERA WITH BUILT-IN FLASH

Special prices for some Reflex and Focal Plane Shutters. Unconditionally guaranteed. Quick, efficient service. Genuine A.S.A. parts. Send your camera for free estimate. Write for FREE detailed circular on Flash sync, and FREE CATALOG.

$6.50 to $12.50 depending on shutter.

EASTERN CAMERA EXCHANGE
Dept. 114, 66 W. Columbia St., Hempstead, N. Y.
Stores in: Lynbrook, Long Beach, Port Washington, Hicksville, Freeport.

MALE PHOTOS for Artists & Sculptors.

DeLuxe Glossy originals.
10—8x10 ..... $5.00; 5.....$3.00
Sample $1.00
18—4x6 ..... $3.00; 10 ..... $2.00
Three samples.....$1.00
Ill. catalogue with each order.
Dr. Frank J. Thompson
919 N. 4th, Manhattan 2, Kan.

INTRODUCTORY OFFERS!

POCKET TRIPOD (7 sections)
Finest quality light weight aluminum. Sturdily constructed. Less than 9" when closed.
Introductory special... only $5.79

EXPOSURE METER
Famous imported exposure meters. Very sensitive photo electric cell.
Introductory SPECIAL . . . only.....$6.95

GADGET BAGS
Smartly styled zippered bag. With side pocket. Roomy. Fine quality plastic.
Introductory special... only $2.29

WALL ST. CAMERA EXCH. 80 Wall St. New York 5, N.Y.
FREE!! *Our bargain catalog* Dept. M14

BUY DIRECT & SAVE — FILE 250 2x2 SLIDES or 125 STEREOS

only 89¢ ea. 3/2.50 ppd.
Best buy on the market. Handsome, durable, convenient. Send post card for literature.
BROOKS MFG. CO. 1514 Aster Place Dept. 215, Cin'ti 24, O.

FILMS DEVELOPED

"Electric Eye—Never Fade"

35 mm. 36 exp. fine grain developed and jumbo high quality enlarged..... **1.25**
20 exp. only 90c
8 exp. developed and JUMBO PRINTS in POCKET ALBUM—or 16 reg. size prints **35c**
12 exp. roll.....50c 16 exp. roll.....65c

DURO-TONE LABS. Free Mailer
BOX 52-AE STATION P BROOKLYN 12, N. Y.

PHOTO MART...

COMPARE... FINER COLOR PRINTS AS LOW AS 20¢!

Compare our prices, compare our workmanship and you'll agree VIVI-COLOR prints are BEST!

2¼ x 3¼—25¢ (only 20¢ each for any 10)
3 x 3.....40¢ 4 x 5.....50¢
5 x 7.....$1.00 8 x 10.....$2.00
120, 620, 35 mm (20 exp) Ansco Color developed—90¢. Minimum order $1.00. Save money, send cash with order to avoid paying 20% extra for C.O.D.

FASTER SERVICE, FINER PRINTS from our modern, scientifically controlled labs.

VIVI COLOR LABS
Dept. M Box 1421 Baltimore 3, Md.

University Photo Lab.

"Perfection Through Research"

True quality fine grain developing. No mass production methods used. Each film is individually handled by a highly trained technician. **Five grades of paper used. All negatives enlarged to 3¼x4½.**

35 MM 20 exp. $1.00 35mm 36 exp. $1.50. 8 exp. 40¢. 12 exp. 60¢. 16 exp. 80¢. Reprints 5¢.

Send film with remittance or write for free mailer

SAVE MONEY ON FILM!
SUPER X or SUPER XX—35mm RELOADS
20 exp. only 35¢ 36 exp. only 50¢

UNIVERSITY PHOTO LAB.
P. O. BOX 7967 CHICAGO 80, ILL.

YOU CAN MAKE CLOSE-UPS LIKE THIS! with SPEED-O-COPY

for owners of **ARGUS C-3, CONTAX LEICA**

Ground glass in position for focusing.

Camera in position to take picture.

SIMPLE • QUICK • ACCURATE
Speed-O-Copy provides positive groundglass focusing and composition for close-ups and copying. Enables you to take pictures as close as 2 inches from your subject!

For complete details and prices, see your dealer or write Dept. M-1

SHULL-MEYER CO.
8681 Melrose Ave., Hollywood 46, Calif.

AMAZING NEW MIDG-O

Now dries FILM as well as your prints

Dries 24 sheets in about 30 minutes
Conversion takes less than 30 seconds

• Dries Glossy as well as Matte Prints • Dries prints up to 11 x 14 Size • Dries a Full Load of 50 8x10 or 400 3x5 in One Hour with no Steady Attendant • Simple to Operate • Two Dryers in One • No Furled Edges—No Blisters • Takes only 14" x 24" of space.

Regular 69.50
Deluxe 97.25
Incorporating the Muslin Blotters.
Film Drying Conversion Unit only 29.50
2.75 C.F.M. Dark Room Ventilator 29.50

Send for brochure

MIDG-O CO. 5863 AVIS DETROIT 9, MICH.

ALL CLOSE-UPS ARE FUN, AND EASY

CAL-CAM FOCUS GUIDE

Works on all 35mm & Bantam cameras using a 2+ or 3+ Portra lens. Not only measures lens to subject distance, but frames subject just as you want it in the picture. Light weight, all metal, fully adjustable. Eliminates all guesswork—parallax trouble. Send make of camera.
Price $8.95

U. S. Postage paid if cash with order, C.O.D. charges added. Calif. orders add 3% sales tax.

CAL-CAM — Dept. MI
1564 N. Grand Oaks Ave., Pasadena 7, Calif.

5* COLOR PRINTS

BRILLIANT • LIFE-LIKE • The BEST money can buy!

2¼ x 3¼.....5 for $1.00
3¼ x 4½.....5 for $2.00
5 x 7.....5 for $4.00

From any size transparencies.

Our improved color process gives you the best color prints possible. Guaranteed Quality!

Fast Service

Send film or write for information on complete color service.

MULTI-COLOR COMPANY
P.O. Box 370, Van Nuys, California

SENSATIONAL BARGAIN!

New Low Priced 35MM PROJECTOR AND CASE COMPLETE ONLY $14.95

MANSFIELD Slide Projector $17.95
Carrying Case—simulated leather....$6.95
TOTAL VALUE....$24.90
SENSATIONAL BARGAIN Now only..... $14.95
You save $9.95
Add 85c for Packing and Shipping

Now every 35mm camera owner can own this 2" x 2" slide projector. Has sharp F3.5 Gruenel Protak Lens . . . Gray hammerloid finish . . . uses low cost 100 watt bulb . . . U. S. approved, AC or DC. *Satisfaction Guaranteed or YOUR MONEY BACK!*

FREE CATALOG of other bargains, quality processing services and film mailing bags.

NATIONAL PHOTO LABS New Hyde Park 41, New York

MODEL 53 P

SAVE ON COLOR PICTURES WITH BLUE FILTER SHIELD

SPEAR **CLIP-ON** QUICK - DETACHABLE FLASH SHIELD

5" Par. blue, clear & diffused shields $2.75. Blue only $1.95.

SPEAR PRODUCTS COMPANY
812 Huron Rd., Cleveland 15, O.

COMPARE THESE LOWEST FILM PRICES! LATE 1954 DATE

	BLACK & WHITE ASA 50 Panchromatic	KODACHROME Genuine Kodak Original Pack
8mm roll, 25 ft. dble	$1.00*	$3.25 Daylight
8mm mag. 25 ft. dble	2.00*	3.85
16mm roll, 100 ft.	2.50*	6.55 or
16mm mag. 50 ft.	1.75*	5.65
35mm 20 exposures 4 for 1.00		3.00 Tungsten

16mm roll, 100 ft. Black & White, ASA 10....$2.25*
16mm roll, 100 ft. Black & White, ASA 24.... 2.50*
35mm CINEKROME, 20 exp. Day or Tung., you receive 20 color negatives and 20 positive transparencies processed and mounted. $2.95 ea., 3 for $6.50
35mm AERO EKTACHROME, ASA 100, 20 exposures, includes processing.....$2.65 ea., 4 for $8.00.

ALL FILM LISTED ABOVE INCLUDES PROCESSING!

NATURAL COLOR Roll Film
Nos. 116, 616, 120, 620, 127 roll film.....40¢
35mm ANSCO COLOR reloads 20 x D/T.....$1.20

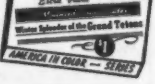
BLACK & WHITE Roll Film—ASA 50
Nos. 116, 616, 120, 620, 127, 828..6 rolls for $1.00

. . . *please include postage with your order* . . .
Cameras, projectors, lenses, etc., at 20% discount. Before you buy—Write for our quotation.
*BUY SIX ROLLS AND GET ONE FREE!

AWON FILMS Dept. M21, 1180 Broadway New York 1, New York

10 COLOR SLIDES Winter Splendor of the Grand Tetons $1

10 sparkling, colorful views of the spectacular Grand Teton Mountains in a magnificient mantel of winter beauty. Very unusual — 10 mounted 2x2 color slides all different, $1.00 prepaid.



List of others sent with order
SLIDE Co. Box 1031, Canton, Ohio

TITLE SLIDES IN COLOR ADD FUN

to your 2x2 mounted showings

T-16 Stop Yawning (Illustrated); T-2 Welcome; T-7 Ladies don't forget your Shoes; T-15 Good Night. The above 4 color slides $1.50

Big illustrated catalog free.

UNIVERSAL SLIDE CO. P. O. Box 779M, Beverly Hills, Calif.

Finer FOTO FINISHING

FASTER SERVICE. Your film processed same day recd. Quality work. Encl. 50¢ addl. for air mail return. Free mailing bags. SATISFACTION GUARANTEED.

35 mm.	
20 exp.	.90
36 exp.	1.30
3¼" x 4½"	

PHOTOCRAFT LABORATORIES
Department A-11 Post Office Box 13387
West Los Angeles Station • Los Angeles 25, California

SPEED-EZ-ELS

Compact—No Adjustments
Easy Focusing—No Eyestrain
6 Popular Sizes—
BUDGET PRICED
Special Sizes on Request
At Better Dealers Everywhere

A. J. GANZ CO.
Hollywood 46, Calif.

GUARANTEED FRESH DATED ANSCO COLOR Safety Film 35mm RELOADS

Type 235 Daylight } 20 exp. $1.25
Type 234 Tungsten } 5 rolls $5.85

ARROW CAMERA EXCHANGE
5 CENTRE ST., HEMPSTEAD, L. I., N. Y.

MIDGET SIZE COLOR PRINTS 20¢

COLOR FILM PROCESSING	2½ x 3¼	25c
	3¼ x 4½	50c
	4 x 5	60c
20 Exp. 35mm Mounted. Roll.....$1.00	5 x 7	85c
Ansco, Ektachrome 120, 620, Roll....$1.00	8 x 10	$1.75
Slide Duplicating, 25c ea.	11 x 14	4.75

Minimum Order $1.50 No C.O.D.

VALLEY COLOR LAB
P.O. Box 2038, W.L.B. Sta., Los Angeles 36, Calif.

Adapt-A-Roll 620

Use roll film in any press camera without making any changes.

- Makes both 2¼ x 2¼ and 2¼ x 3¼ exposures on 620 roll film
- Used just like cut film holder, incl. dark slide
- Manufacturer's one-year guarantee

$29.95

At dealers . . . or send coupon to:

MAR-BAR, INC.
205 S. Beverly Dr., Bev. Hills, Cal.

(All sizes: 2¼ x 3¼, 3¼ x 4¼, or 4 x 5)

Camera model, size_____
Name_____
Address_____
City_____ State_____
MP-41

Wild Life Films

Exciting, dramatic action in the natural habitat of animals of forest and plains. 8 mm or 16 mm in beautiful color or B & W. Also 2" x 2" color slides. Write for free illustrated literature.

WILD LIFE FILMS
5151 Strohm Ave., Rm. 3A, No. Hollywood, Calif.

NUMBÅTABS

COLOR SLIDE INDEX TABS IN RED, GREEN, BLUE, ORANGE, BLACK. PLEASE SPECIFY COLOR.
NUMBERED • SELF-STICKING • LAST FOREVER
AT YOUR DEALER OR SEND 25c FOR PKG. OF 100 PPD.

The SAUNDERS Co. ROCHESTER, NEW YORK

PHOTO MART . . .

SPECIAL
35MM 6 for $1.00 COLOR
TRANSPARENCY DUPLICATION
MOUNTED IN STANDARD 2x2 SLIDES

COLOR PRINT SERVICE
2X - 2½" x 3½" ea. .25
3X - 3¼x4¼ ea. .50 | 5X - 5x7 ea. 1.00
4X - 4x5 ea. .60 | 8X - 8x10 ea. 2.00
Made on Ansco Color Printon from Ansco or Eastman Transparencies

ANSCO COLOR FILM PROCESSING
35mm 20 Exp Mounted, 120 or 620 Processed $1.
35mm 36 Exp. Mounted $1.50

COLOR TV FILM LABS
144 FIFTH AVE., Dept. M, New York 11, N.Y.
24 HR. SERVICE • WE SHIP FIRST CLASS MAIL

PHOTOGRAPHIC FACTS AND FORMULAS
by Wall and Jordan—This readable book is a great time saver to the serious photographer—professional or amateur. Every formula of proven worth has been recorded for your use. Facts are presented clearly and accurately to make it a valuable reference for your darkroom. Begun forty years ago, constantly revised. 374 pages, 6x9¼, cloth. $5.00
Add 3% sales tax for New York City delivery
American Photographic Book Pub. Co., Inc.
251 4th Ave., N.Y. 10, N.Y.

LOOKING . . .
. . . for a Quality Photo-Laboratory
to handle your films with
✓ CARE
✓ THOUGHT and
✓ SKILL
. . . HERE WE ARE at reasonable prices:
120 or 620 film dev. in Finex by inspection $ .40
35 mm. film dev. in Finex by inspection $ .60
8 x 10 enlargement, incl. cropping and spotting $ .90
11 x 14 enlargement, incl. cropping and spotting $1.50
AND YOU CAN DEPEND ON
LECO PHOTO SERVICE
established 1938
The Laboratory for Professionals and Advanced Amateurs
Dept. M, 11 West 42 St., New York 36, N. Y.
Ask for complete price list and mailing bags

AN EASY, QUICK RELIABLE PRINT STRAIGHTENER
Portable—no fuss—no mess—always ready
Prints can be straightened (flat) with very little effort, always ready, easy to use, economical, no upkeep. Can straighten a single print, or a dozen. Takes any size from 35 MM contacts to 11 X 14 either single or double weight paper.
Used by amateurs and professionals.
Send Check or Money Order—$3.95 Ppd.—No C.O.D.'s.
J. A. KOSEK
444 North 13th Street, Philadelphia 23, Pennsylvania

☆ COLOR SLIDES from KODACOLOR ☆
35mm Color Slides from any size Kodacolor Negative! Mounted for projection. Minimum order.....$1.75 35¢ ea.
COLOR SLIDE DUPLICATES 35mm—Mounted. Min. order.....$1.00 20¢ ea.
MULTI-COLOR COMPANY
P.O. Box 370, Van Nuys, California

Finest Quality Ansco
COLOR PRINTS
2¼ x 3¼.....$0.50 Dup. $0.40
4 x 5..... 1.00 .75
5 x 7 MTD..... 2.00 1.75
8 x 10 MTD..... 3.50 3.00
INDIVIDUALLY MADE — SPECIAL COLOR BALANCING
CUSTOMCRAFT COLOR SERVICE
P. O. Box 6618 Dept. M Washington 9, D. C.

35 MM DEVELOPING
Films fine grain developed, vaporated to prevent scratching. Enlarged to 3¼ x 4½, 36 exposure, glossy paper $1.50. Double weight portrait paper $2.25. 20 exp. roll glossy $1.10. One day service. Highest Quality Finishing.
36 FULL SIZE 3¼X 4½ Only $1.50 ENLARGEMENTS!
8 EXPOSURE ROLL DEVELOPED AND 8 BEAUTIFUL PRINTS... 30¢
Free! MAILERS AND OTHER OUTSTANDING OFFERS!
UNIVERSAL PHOTO SERVICE LaCrosse 22, Wisconsin

AT LEAST 20% DISCOUNT!*
ANY BRAND! BRAND NEW!
CAMERAS, PROJECTORS, LENSES, EXPOSURE METERS, DARKROOM SUPPLIES, FILM (ANY FRESH BRAND) PAPERS and CHEMICALS and all other photographic supplies.
Write NOW for Low Discount prices on items wanted!
AWON FILMS Dept. MD1, 1180 Broadway New York 1, New York

ADJUST-O-LENS
Lens aperture indicator. Operates in the dark with ease. Large visible lens "f/." stops. Calibrated dial at your fingertips. A well made enlarger accessory, not just a gadget. Guaranteed. Maximum lens diameter 2⅜".
A practical gift. No C.O.D.'s—Ppd.. $2.00
Adjust-O-Lens Co.
76 Post Road, Larchmont, N. Y.

4x5 COLOR PRINTS—50c
COLOR FILM PROCESSING
20 Exp. 35mm Mounted, Roll ...$1.00
Ansco, Ektachrome 120 620, Roll ...$1.00
Slide Duplicating 25c ea.
COLOR PRINTS 4"x5" — 50¢
Midget size..... 15c
2¼x3¼ 25c
3¼x4½ 45c
5x7 ..... 1.00
8x10 ..... 2.00
11x14 ..... 5.00
Minimum Order $1.50 No C.O.D.
CANYON COLOR COMPANY
P. O. Box 2036, Wilshire La Brea Sta., Los Angeles 36

LIGHTS THE THING
For FREE illustrated folder on Synctron Flash see your dealer or write:
Dormitzer
ELECTRIC & MFG. CO., Inc.
5 Hadley Street Cambridge 40, Mass.
ALWAYS USE SYNCTRON

WALLET 2¼ x 3¾ COLOR PRINTS 25c ea.
All Orders Shipped 1st Class Mail
COLOR PRINTS
3¼ x 4½.....50c
4 x 5.....75c
5 x 7.....90c
8 x 10.....2.00
11 x 14.....4.50
COLOR PROCESSING
Ansco & Ektachrome
120-620 or 35mm (20 exp.) mounted 1.00 ROLL
COLOR SLIDE DUPLICATING 25c ea.
PREMIER COLOR COMPANY
Box 8626 Cole Branch Los Angeles 46, Calif.

Reload Your Own! Not War Surplus 35mm FILM FACTORY FRESH!
E. K. PLUS X
27½ ft....$1.00
100 ft....$3.50
NEW ANSCO COLOR
8 LOADS—20 EXP. EACH
Notched & tongued BULK FILM
Daylight & Tungsten $8.49
ALL PRICES POSTPAID • IN CALIFORNIA ADD SALES TAX
PACIFIC COAST FILM CO. 1510 N. Sierra Bonita Hollywood 46, Calif.

INDEX NOW AVAILABLE
In answer to many requests we have prepared an index covering issues from January, 1952 through December, 1952, of all articles published in MODERN for those issues, indexed according to subject, author and title. We do not expect them to last long. You may have one for 25 cents.
Modern Photography Book Dept. 251 4th Ave. New York 10. N. Y.

35mm COLOR FILM
20 exp. cart.....PROCESSING AND MOUNTING INCLUDED!
$2.49 ea.....3 or more $2.19 ea.
GUARANTEED FRESH—NOT SURPLUS
SOLAR CINE PRODUCTS, INC.
4247 South Kedzie • Chicago 32, Ill.

Classified Ads . . .

Classified Want Ads may be inserted in MODERN PHOTOGRAPHY by any reliable individual, camera dealer, or specialty house. Terms: 45¢ a word. Each word, including each item in the address, counts as one word. Send cash with order. 5% discount for 6 consecutive insertions. Forms close on the 1st of each month.

cameras, equipment for sale

SITTING DOWN YOU HORSETRADE COMFORTABLY AT JAY REED'S, THE ONLY CAMERA STORE DESIGNED FOR CUSTOMERS COMFORT, CONVENIENCE AND CONVIVIALITY! OPEN EVENINGS! CHROMOPTICS, 943 STATE, CHICAGO 10.

SHOP EVERYWHERE FIRST, THEN JAY REED! LOWEST OVERHEAD permits SQUARE DEALING without illusionary bargains! For worthwhile brands, new or used—CHROMOPTICS BY JAY REED, 943 N. State, Chicago 10, Ill.

SPECIALISTS IN BUYING—and selling top GERMAN cameras in superfine condition. UNUSUAL LENSES and accessories; BEST condition—BEST prices: CHROMOPTICS BY JAY REED, 943 N. State, Chicago 10, Ill.

TAKE IT EASY! INFORMATIVE! PRESSURELESS SELLING! CHROMOPTICS, 943 STATE, CHICAGO 10.

Contessa, latest M-X, T-coated F2.8 Tessar, feet, ASA, spotless $120.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Contax II-a, T-coated F2 Sonnar (Opton), feet, spotless $245.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Contax II-a, T-coated F1.5 Sonnar (Opton), feet, spotless $265.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Leica III-F, red dial, coated F2 Summitar, feet, spotless $260.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Leica III-F, red dial, coated F1.5 Summarit, feet, spotless $295.00; Altman's. 64 E. Monroe, Chicago 3, Ill.

Nikon, coated F1.4 Nikkor, latest, spotless $225.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

3¼ x 4¼ Crown Graphic, coated F4.7 Ektar, rangefinder, flashgun, pack, holder, spotless $165.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

250 exposure Leica, like new $400.00. Altman's, 64 E. Monroe, Chicago 3, Ill.

3¼ x 4¼ Pacemaker Speed Graphic, coated F4.7 Ektar, rangefinder, flashgun, pack, holder, spotless $175.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Medalist II, coated F3.5 Ektar, spotless $175.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Retina II-a, coated F2 Xenon, latest M-X, spotless $110.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Rolleicord IV, coated F3.5 Xenar, latest M-X case, spotless $120.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Viewlex 2 x 2 V-33L projector, 300w, w/blower $44.47. SVE Skyline B, 300w, blower, $37.97. Both unused. Free catalog 1001 bargains. DEALERS MART, Dept. M10A, 11 Willard Ave., Mt. Vernon, N. Y.

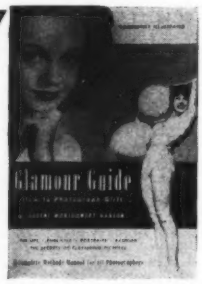
Classified continued on page 124

Modern PHOTOGRAPHY'S Book Store

After a careful selection of current photographic books, we recommend the following. If you don't see the book you want, query us anyway. Chances are we can get any in-print, photographic title you want.

SPECIAL OFFER

On any order for $25.00 or more we shall be glad to include, at no charge, a one-year subscription to Modern Photography. Just circle the word SUB in the coupon below.

197 

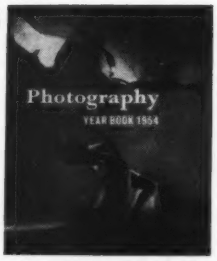
GLAMOUR GUIDE

How to photograph girls, by Eugene Hanson

Pose, lighting, make-up problems all discussed in a readable book by one who has succeeded in this difficult work. Illustrated. **$5.00**

ANNUALS

1 **Universal Photo Almanac 1953 edition.** $1.75

161 

Photography Year Book

Prize international photographs on handsome display. Edited by Harold Lewis. (Published in Great Britain.) Clothbound. **$4.95**

COLOR PHOTOGRAPHY

13 **Making Better Color Slides** *by Fred Bond*
Answers the questions every slide maker wants to know. Simple non-technical books by top man in this field. Two books, Part 1 and Part 2. **EACH $3.50**

COMPOSITION

84 **The Model** *by Wm. Mortensen*
Figure work and portraiture: Direction and posing of model, etc. **$5.50**

ENLARGING

25

LOOTENS

On Photographic Enlarging and Print Quality—272 pages; over 150 illustrations and diagrams; priceless how-to-do-it tricks and advice that will definitely improve any photographer's ability to get richer, "juicier" prints by projection. Considered most practical book on subject ever written. Over sixty-five thousand copies sold. **$3.95**

35MM PHOTOGRAPHY

78 **Photography with a Leica** *by J. Allan Cash*
A practical book by a world famous Leica user, on all aspects. **$3.75**

143 **35mm Photography with an Exakta** *by Kenneth Allison*
Outstanding new text, with many fine photos, illustrating all capabilities of this fine camera. **$3.00**

217 **The Retina Way** *by O. R. Croy* **$3.75**

MOTION PICTURE PHOTOGRAPHY

49 **Amateur Movies and How to Make Them** *by A. Strassen*
Indispensable for the amateur. Covers every phase of taking movies. **$4.00**

Guide Books, *by W. D. Emanuel*
Illustrated, well thought out, highly recommended.
If you own one of these cameras you NEED the guide book for it:

168 *Contax*	$1.75	145 *Rollei*	$1.75
140 *Leica*	1.75	216 *Bolex*	1.75
141 *Exakta*	1.75	142 *Retina*	1.25

Guide Books, *by Tydings*

144 *Kodak Miniature Cameras*	76 *Bolsey*
208 *Twin Lens Reflex*	153 *Argus*
209 *Modern Rolleiflex*	215 *Contax*
77 *Stereo Realist*	178 *Bolex*
177 *Speed Graphic*	173 *Voigtlander*

$1.95 EACH

SPECIAL SUBJECTS, TECHNIQUES AND PROCESSES

152 **Without Assignment** (How to free-lance in photography) *by Howard Byrne,* who learned how to sell editors the hard way. "The clarity and completeness of this book make it the best of its kind we have seen."—From review, Modern Photography. **$3.95**

150 **Lenses in Photography** *by Rudolph Kingslake*
There's information here for the person who just wants to know what makes a Tessar different from a Dagor; there's also more than enough in the way of formulas and physics for the fellow who wants more than a superficial knowledge of lenses. **$2.95**

196 **My Experience In Color Photography** *by Dr. Paul Wolff* **$10.00**

104 **Telephotography** *by C. F. Lan-Davis*
Explains the telephoto lens and its power to produce large pictures of distant objects. **$2.00**

81 **100 Studies of the Figure** *by John Rawlings*
In compositional variety, photographic technique, and sheer beauty of subject matter and presentation, this book is the best of its kind we've ever seen. All of the pictures were made of a single model, and with very few exceptions only natural light was used both indoors and out. **$5.50**

167 **Where and How to Sell Your Pictures**
A workaday bible for free-lance photographers, including over 800 names, addresses and specifications from buyers of photographs; published by Modern Photography. *By A. W. Ahlers.* Second printing. **$1.50**

166 **Rollei Photography** *by Jacob Deschin*
Not a rehash, but a helpful book on the Rollei in use, describing techniques of the top photographers. **$5.00**

6 **Child Photography—The Modern Way**—*by Josef Schneider,* one of the country's leading child photographers. Tells and shows in 208 pages and 275 illustrations and diagrams, all the tricks that get best pictures of little folks—tots to 'teen-agers. Gives priceless information on most effective use of flood, flash and speedlights for black and white, color. All one needs to know to take really fine pictures of children. **$4.95**

85 **Three Dimensional Photography** *by Herb C. McKay*
New 1953 edition, by one of world's foremost authorities on stereoscopy. **$5.75**

38 **Feininger on Photography** *by Andreas Feininger*
The last word on how to *make,* rather than take superior photographs, by the distinguished "Life" photographer. New low price. **$6.95**

207 **Lens Testing Chart**
These charts were designed by the Editor of the British magazine, Amateur Photographer. With a little testing anyone can determine exactly how good a lens really is and the maximum size to which negatives taken with that lens can be enlarged without noticeable loss of sharpness. Set of 15 charts and 25-page instruction manual. **$1.75**

204 **The Contax Way** *by H. Freytag*
New printing of established title authoritatively dealing with every aspect of Contax equipment and subjects. Every user of the Contax needs this book. **$3.75**

203 **Naked Hollywood** *by Weegee*
Picture book about the fabled West Coast Wonderland by that fantastic author-photographer. Movie industry gets a rough going over; you'll get near-hysteria. **$5.00**

214 **Filter Manual** *by Carl Bakal*
Tells how to use filters for both black and white and color. The filter dictionary section alone lists over 200 subjects with specific recommendation for every effect desired. **$3.00**

220

Pocket Leica Book *by Theo. Kisselbach*
A new, practical, compact and handy book for the new Leica owner. One of the best manuals on this camera. Will save the beginner many times its cost. Charts, diagrams, illustrations are excellent. **$2.95**

IMPORTANT LATE ARRIVALS

222 **A Guide to Medical and Dental Photography** *by Dr. Kenneth Tydings* **$1.95**

223 **Principles of Color Photography** *by Evans, Hanson and Brewer*
A complete scientific treatise by three Eastman Kodak experts. **$11.00**

224

Making Effective Photographs

by L. Whitney Standish—If you are a casual picture maker, here is the book to help you get pictorial quality into your prints. Standish explains the terminology of pictorial work and then guides your progress with his fund of basic knowledge. 208 pages, 100 illustrations. **$4.95**

If coupon is clipped send order anyway to Modern's Book Store, 251 4th Ave., New York 10, N. Y.

Modern PHOTOGRAPHY Book Store
251 4th Avenue, New York 10, N. Y. **Amt. Encl. $_____**

Please send me postpaid the books whose numbers I have circled.

197 1 161 13 84 25 78 143 217 49 168 140
141 145 216 142 144 208 209 77 177 76 153
215 178 173 152 150 196 104 81 167 166 6
85 38 207 204 203 214 220 222 223 224 SUB

Name_____

Address_____

City_____ **State**_____

1-54 ALL ORDERS ARE SHIPPED POSTPAID. No C.O.D.'s, add 3% sales tax with orders for N. Y. City delivery, add 10% for delivery outside U.S.A., except APO's. If not satisfied, return books to Modern Photography within 5 days and money will be refunded. Allow approximately 10 days for delivery

Trade your old Contax camera body for brand new Contax IIa with internal synchronization—difference $116.00 pending inspection. New Contax IIIa body $34.00 higher. Trade your Leica IIIf body for new Leica IIIf body with red dial, new speeds—difference $50.00 pending inspection. Trade your Leica Summitar for new Summicron—difference $100.00 pending inspection. Trade your Exakta camera body for new Exakta VX body—difference $50.00 to $100.00 pending inspection. New Auto Exakta VX, fully automatic lens opening—with f1.9 Xenon, $417.00, with f2.8 Schneider $289.00. Brand new Contessas, f2.8 Tessar, $153.00! Brand new Ikoflex IIa, f3.5 Tessar, $169.00! Bolsey B2, case, flashgun, $46.00. Ikonta 35, f3.5 $42.00. New Vitessa MX, f2, $129.50. Canon IIIa, f1.9 Serenar, $126.00. Canon, f1.8 Serenar, flash, $169.50. Super Ikonta A, f3.5, $63.00. Medalist II, $166.00. Argoflex, f4.5, $28.50. Rolleicord, f3.5 Xenar, $69.50. Rolleicord III, f3.5 Xenar, $89.50. Rolleiflex, old model, f3.8 Tessar, $47.50. Rolleiflex MX, latest, immaculate, $189.50. Ansco Reflex, $89.50. 2¼x3¼ Linhof 3 lens outfit, regular $575.00—spotless, $435.00. 4x5 Linhof 3 lens outfit, regular $622.00—spotless, $478.50. Minox supplies—Try our Minox finishing—it is superb! Money back guaranteed mail orders! We ship postpaid. Air Mail upon request! American Camera Exchange, 210 W. 7th St., Los Angeles 14, Calif.

Kine-Exacta VX, 50mm F1.9 Xenon, automatic diaphragm, rangefinder Penta-Prism, spotless $380.00, Altman's, 64 E. Monroe, Chicago 3, Ill.

Pentacon, T-coated F2 Biotar, pre-set, feet, spotless $225.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Automatic Rolleiflex, latest M-X, T-coated F3.5 Tessar, case, spotless $185.00; Altman's, 64 E. Monroe, Chicago 3, Ill.

Canon camera, Model IVs, f:1.8 Serenar, still in factory wrappings, $215.90. Free catalog 1001 bargains, DEALERS MART, Dept. M10, 11 Willard Ave., Mt. Vernon, N. Y.

20 to 40% discount on EVERYTHING PHOTOGRAPHIC. DART, 3812 Atlantic Ave., Brooklyn 24, N. Y.

DISCOUNT TO 40%—CAMERAS, PROJECTORS, TAPE RECORDERS, LENSES. QUOTATIONS GIVEN ON YOUR SPECIFIC NEEDS CLASSIFIED CAMERA, A 2375E 65 St., Brooklyn, N. Y.

TAPE Recorders. Tapes. Accessories. Unusual Values. Dressner, 624D East 29th Street, New York City 9.

Brand new Contax IIIa, f2 Sonnar, $295. Gause, 1423 Grant Avenue, Wilmington, Delaware. 6-8711.

Leica 3F Red Dial, Summicron Lens, Extra Lenses, Like New, sacrifice, M. Newman, 261 E. Burnside Ave., New York, New York.

ULTRA powerful telephoto lenses. Trifling cost. For cameras with focal plane shutters. Name your camera. Carl Jamer, Manorville 4, N. Y.

Polaroid Pathfinder, f4.5, close-up lenses, filters, meter, cost $289.65, still in original carton, $195.00. Zaner, 2915 N. 83rd St., Milwaukee 10, Wis.

wanted to buy

IMMEDIATE AIRMAIL PAYMENTS for precision cameras, lenses, accessories: TOP PRICES for FINE condition; Specialists in GERMAN equipment: CHROMOPTICS BY JAY REED, 943 N. State, Chicago 10, Ill.

CASH VIA AIRMAIL for: Bell & Howell, Bolex, Contax, Foton, Graflex Super D, Graphics (Pacemaker and Crown), Hasselblad, Kine-Exacta, Leica, Linhof, Medalist II, Nikon, Retinas, Rolleiflex, Super Ikontas, send in or write for offer, immediate reply; Altman's, 64 E. Monroe, Chicago 3, Ill.

LENSES, AERIAL CAMERAS, GUN CAMERAS (GSAP), MOTION PICTURE CAMERAS. CASH AIRMAILED IMMEDIATELY FOR THESE AND AERIAL LENSES, INCLUDING 7" AEROEKTARS, 20" and 40" BAUSCH AND LOMB, ETC. SHIP INSURED OR WRITE. Gordon Enterprises, 5362 N. Cahuenga, North Hollywood, Calif.

Spare cassettes for Leica 250 state price. Gerald Forbes, Rt. 3, Box 105, Oxford, Miss.

IMMEDIATE Air Mail Cash! American Camera Exchange, 210 W. 7th St., Los Angeles 14, Calif.

PREMIUM Prices for fine equipment! American Camera Exchange, 210 W. 7th St., Los Angeles 14, Calif.

CONSISTENTLY paying more! American Camera Exchange, 210 W. 7th St., Los Angeles 14, Calif.

camera repairs

SPECIALISTS in Foreign and Domestic camera repairs. Lens polishing, re-cementing, re-focusing. Bellows installed. Rangefinders repaired, sync. Repairs guaranteed up to one year. Chicago Camera Specialists, 17 N. State St., Chicago 2, Illinois.

COMPUR, Wollensak, Graflex, Supermatic, Ilex, Leica, Prontor, Argus and Robot Shutter Repair Service a Specialty (Prompt 24 Hour Service). CENTRAL STATES CAMERA REPAIRS, 3116 E. Douglas, Wichita 8, Kansas.

Foreign cameras: Six years with the inventor of the Contax (Zeiss) assure you 100% repairs on all foreign and domestic cameras. Internal synchronization installed on Contax, Leica, Rollei, Ikonta, etc. All work guaranteed and conscientiously done. Strauss, Photo-Technical Service, 930 "F" Street, N. W., Washington, D. C.

CANON CAMERAS—Complete service, all models. Work guaranteed. Send camera for free estimate. International Camera Corp., 847 W. Adams, Chicago 7, Ill.

exposure meter repairs

Send any make. Prompt Service. Reasonable charges. The Rhamstine Co., Meter Div., Harlingen, Texas.

photo supplies

PHOTOGRAPHY FOR PLEASURE or profit. Learn at home. Practical basic training. Long established school. Free booklet. American School of Photography, 835 Diversey Parkway, Dept. 2121, Chicago 14.

35MM Fresh Reloaded Cartridges; 4 for $1.00 Empties: 20 for $1.00. Berea Photo, Berea, Ohio.

photo finishing

PHOTOMURALS. Any size, 3 feet up. Your own negatives or hundreds of our pictures to choose from. Catalog 25c. Photomammoth Murals, 12048 Vanowen Street, Dept. P, North Hollywood, Calif.

SPECIAL OFFER. Old, faded, cracked photos copied and restored. Free estimate. Photo Restoration Division, 1476 Seabury Place, New York 60, N. Y.

PHOTOMURALS, 20 x 24, $2.50; 20 x 30, $3.00; 30 x 40, $4.00; 40 x 60, $7.50. Send negatives, prints, transparencies. Photomurals, 1544 Seabury Place, Bronx 60, N. Y.

ENLARGEMENTS, CUSTOM MADE. FAST SERVICE. B&W or warmtone. DOUBLE-WEIGHT, Glossy, Semi-matte. Silk, Matte, Tapestry, 5x7, 25c; 8x10, 40c; 11x14, 80c; 16x20, $1.75. New Negatives, 50c. COMPLETE SERVICE, including Retouching, Hand Oil Coloring, Print Toning. PHOTO ENLARGING SERVICE, 949 Broadway, New York 10, N. Y.

NO Negative? Send $1.00 for new negative and two 5 x 7 enlargements from picture, transparency, colorprint, polaroid, stereoframes, tintypes. Inquire movie frame enlargements. Christmas card sample. Projection slides from any print or negative. Black and white 3 one dollar. Colorslides from any kodacolorprint, kodachromeprint, printon, 4 two dollars. 8 x 10 warmtone enlargements 3 one dollar. Curiophoto, 1187 Jerome Ave., New York 52, N. Y.

"TITLE your snapshots with brilliant silver metallic ink. Complete Set $1.00. Metalux, Box 17, Dept. M, Bay Station, Brooklyn 35, New York."

OFFICIAL MINOX PHOTO FINISHING IN CANADA. Ultra fine-grain developing—processing by hand up to 35mm work. All orders handled by mail. Two days' service. DEPRE PHOTO, 34 Wilcocks St., Toronto 5, Ont.

FREE 35MM FILM included with each roll B&W 35mm developed and custom printed. 20 exp.—$1.00—36 exp.—$1.50. Film fresh dated—safety. Wheeler Photo, Box 701, Ocean Park, California.

movies, movie film

Inaugural Parade, Travel Movies—Kodachrome projection sample $1.00, lists 10c; Colorslides—views 10—$1.00; art, glamour, Inaugural Parade 3—$1.00, lists, sample slide 35c. Galloway Films, Box 6953E, Washington 20, D. C.

5,000 NEW—USED 8-16mm Silent—Sound Films. International-D, 2120 Strauss, Brooklyn 12.

HUNDREDS of Subjects! Travels, Comedies, Adventure, Musicals, Etc. Best Movie Headquarters of ALL! Catalogs 15c. Turke Films, Hinsdale 2, Ill.

GUARANTEED FRESH 8mm roll, magazine; 16mm roll, magazine movie films. Color, B&W. Free catalog. ESO-G, 47th Holly, Kansas City 2, Missouri.

8mm RENTALS 19c weekly. Free catalogue. Cooper's Mart, Eaton, Ohio.

Bargains 16mm Sound Features and shorts also for exchange at 50c reel. Bedner, 5300 So. Talman, Chicago.

MALE ACTION and posing shots of Mr. America and other perfectly developed men. All close-ups. 60 ft. 8mm—$3.50, 120 ft. 16mm—$6.00. Dr. Frank Thompson, 919 4th, Manhattan, Kansas.

NEVER BEFORE has ANYONE offered such AMAZING HOME MOVIE VALUES! Brand New full reel 16mm Sound Films as low as $6.95. Brand new 3 reel Sound Features at only $17.95! Also the largest list of Used Sound Musicals ever offered at only 6 for $5.00—Boxed And Spooled! New 8mm and 16mm releases at big savings. Brand New Screens at ⅓ off list price! Your old films accepted in trade for new films, projectors, cameras, etc. Send for FREE LISTS and quotations. IMPERIAL ENTERPRISE INC., 34 PARK ROW, DEPT M, NEW YORK 38, N. Y.

1954 ROSE PARADE movies. Kodachrome. Colorful floats. Beautiful girls. 200 ft. 16mm. $34.95. 100 ft. 8mm. $17.50. Calif. add tax. C.O.D.'s accepted. AVALON DAGGETT—441 No. Orange Dr., Los Angeles 36, Calif.

NEW MOVIE BARGAINS! 50' 8mm. Prevue film, 59c. 300' 16mm. silent film, (value $9.75), $1.98—our title choice. Blackhawk 8mm. films—children's films, railroads, collector's items, hunting, fishing—150', $2.98; Bible stories, 300', $7.98. New, used 16mm. sound, silent bargains, too! Six used 100' 16mm. reverse-image Panoram musicals, $3.49. Good used 16mm. sound projectors—all leading makes—$129.95, some $99.95. Big catalog free. Blackhawk Films, 1630 Eastin Bldg., Davenport, Iowa.

16mm SOUND FILMS—Trade one for one. Features, Shorts. Write—Bob and Harry, 126 Harriet Street, Elmira, N. Y.

1954 ROSE Parade Kodachrome Movies, gorgeous girls, floats, beautifully titled; 8mm 100' (Highlights) $12.50. 200' complete version—$20.00. California Color Classics, Box 16441, Hollywood 28, Calif.

YELLOWSTONE—Projection sample $1.00 Ten Colorslides $1.00. Lists 10c. Eddings, 32M Roberts, Corning, N. Y.

Free Circulars—Listing our B & W roll movie films, chemicals, developing sets and bulk films. Fromaders, Box 637-G, Davenport, Iowa.

CARLSBAD CAVERNS, The Antarctic, Pitcairn Island, others. 8mm-16mm Home Movie Travels, Carlsbad Caverns sample color film $1.50, specify 8mm, 16mm. Catalogue 5c. TEX HELM, Dept. MMCA, Carlsbad, N. M.

FREE CATALOGUE. New 8-16mm film releases. Box 14, Midtown Station, New York 18, N. Y.

movie titles

PERSONALIZED TITLES improve your movies. Free brochure. Sierra Western Co., 2748-J East Broadway, Long Beach 3, Calif.

color slides

Miami, Havana, Bahamas. Kodachromes $2.50 per dozen. Free catalog. JACKSON'S CAMERA STORE, 60 West Flagler Street, Miami, Florida.

COLORSLIDES, Travel, nature, etc. Free list. Sample 30c. Kelly M. Choda, P.O. Box 588, Stanford, California.

Unusual Pin-Ups. Twelve NEW sets. Eight glossy 4 x 5 Photos to set $2.00. Five color slides to set $2.00. 8mm 50 feet movies $3.00. BERNARD, Box 16961, MP West Branch, Hollywood 46, Calif.

NATURAL color, 2 x 2 slides. Hollywood's best posed by the masters. 4 for $1.00. 10 for $2.00. Perry Pelton, Box 5967, Dept. 14, Chicago 7, Illinois.

BEAUTIFUL COLOR SLIDES 10c each. Send dime for sample and latest issue "Slide News". SLIDE SUPPLY, Box 1031, Canton, Ohio.

20 Beautiful colored slides $1.00. Sample, catalog 20c. Over twenty million sold! Sanford Company, Ashtabula, Ohio. (Established 1941.)

BEAUTIFUL KODACHROMES, California, Arizona, New Mexico, Festivals, Missions, Ghost Towns, Cliff Dwellers, Death Valley, Rose Parade, Boy Scout Jamboree, Glass Church, Las Vegas, Canada, Mexico, Alaska, Finland, Spain. Three slides $1.00. REDFIELD COLOR SLIDES, 676 Buchon Street, San Luis Obispo, California.

Yellowstone—Twenty Colorslides $2.00. 50 ft. 8mm $2.00. 100 ft. 16mm $4.00. EDDINGS, Corning R1, N. Y.

STEREO REALIST Color Slides Carlsbad Caverns. Sample 75c. Catalogue 5c. TEX HELM, Dept. MSR. Carlsbad, N. M.

CARLSBAD CAVERNS—More New Interior Color Slides added. Sample 50c. . . . New Illustrated Catalogue with text 15c. TEX HELM, Dept. MPICS, Carlsbad, New Mexico.

Changing of Palace Guard, London, set of 8 $1.95—CORONATION set of 20 $5.95—FREE catalog, 500 scenic sets—Mars, 143—19x Rockaway, Jamaica, N. Y.—also, 65 STEREO SETS.

SLIDES OF THE EAST. White Mountains, Plymouth, Lexington, Cape Cod, Niagara, Ausable Chasm, Santa's Workshop, Quebec, Gaspé, Bermuda, Fall Foliage, many others. On approval at new low price. Send for catalog beautiful 2 x 2 and stereo kodachromes by Henry Cobb Shaw, 8-2 Bosworth St., Boston 8, Mass.

SPECIAL! THIRTY-SIX GENUINE KODACHROMES OF GLACIER PARK SENT ON APPROVAL. Over 100 subjects of Glacier available. Send now for free catalog and selection from Mexico, Canada, or any Western Park. Douglas Whiteside, Yosemite, California.

125,000 SLIDES IN STOCK insures quick delivery. RoLoc Slides, produced by Captain M. W. Arps, U. S. Navy, retired, available for all parts of United States and for 50 foreign countries. Send 6¢ (stamps) for 40 page catalog. Name foreign countries you want as these separate lists. RoLoc, Box 1715, Washington 13, D. C.

Comic Slides to Contrast Your Scenic Collection. Witty, novel, satirical. Sent on approval. Western Photo Slide, Box 1112D, Santa Monica, Calif.

35mm Owners make your Hobby Pay. Details 25c (refundable). H. Stebbins, Box 62, Agawam, Mass.

photos, b & w slides

2x2 SLIDES from any size negative. Mounted. 15c each. Miller Slide Service. Holdrege, Nebraska.

Post Card Pin-Ups, Natural Color Kodachrome, 10 Different $1.00. Frederick Forman, 868 Lorimer, Brooklyn 22, N. Y.

50 ENGLISH MODELS in artistic Figure-Ballet-Pinup-poses. Also: illustrated Art Photography Courses. Send 1-3-5 Dollar for Samples. Prospectuses, Lists. Studio Jordan, 17 Cheyne Close, London, N. W. 4, England.

MALE PHYSIQUE PHOTOS for artists and sculptors. Special Catalog "B" consists of twelve dual poses and four single poses. Send $1.00 to Richard Roscoe, P. O. Box 4249, San Francisco 1, California.

DRUM MAJORETTES, 32 Glossy Photos $1.00. Frederick Forman, 868 Lorimer, Brooklyn 22, N. Y.

TRANSPARENCIES; 35mm mounted 7c. Optical reductions mounted 13c. Kirwin Slidefilm Laboratory, Crystal Lake 1, Illinois.

2 x 2 slides from any size negatives, 15c . . . Kodachromes of scenic west. Projection Slide Service, Box 865, Lincoln, Nebraska.

TALL TEXAS BEAUTIES, pin-up photos. Six for $1.00. Graphic Photos, Box 1515, Texas City, Texas.

Twelve 5 x 7 photos women boxing or wrestling (choice) two dollars. Fifty different, five dollars. Bernard Kobel, Frankfort, Indiana.

Twelve 5 x 7 photos highly tattooed circus men —women (choice) two dollars. Fifty different, five dollars. Bernard Kobel, Frankfort, Indiana.

X-RAY MIND. Dangerous power over others. Inquire. Send dime. Drishnar Institute, 1912 Lincoln-Park-West, Dept. CM, Chicago 14.

BEAUTIFUL SOUTHERN MODELS. 6 artistic & appealing photos $1.00. 15—$2.00. 42 —$5.00. 102—$10.00. Free surprise gift with each $5.00 order. Three free gifts valued at $3.00 with each $10.00 order. Money back guarantee. Oakley & Wootten, Gallatin, Tenn.

photo jewelry

Mount your photos into pins, earrings, tieclasps, etc. Amazing possibilities. Send 10c for illustrated brochure and complete information. Milady-Fair Co., GPO Box 1328, NYC 1.

miscellaneous

LACED GLAMOUR CORSETS—pinup costume accessories; stamp brings list. PAMELA CO., Box 247, Floral Park, N. Y.

ARTISTS, PHOTOGRAPHERS. Have you exhausted all posing possibilities? Now for a limited time only, you can buy New and Exclusive full length photographic Examples illustrating the proper posing of the female subject. 18 examples $1.00. 41 for $2.00. All different. Perry Pelton Photos, Box 5967, Dept. 67, Chicago 7, Ill.

INTERESTING MAILS—25c keeps your mail box full three months. BENTZ (Desk 1/98), Chatawa, Mississippi.

BUY WHOLESALE thousands of Nationally advertised appliances, giftware, watches, Cameras, dolls, etc. Catalog 50c (refundable with order). Dart Co., 3812 Atlantic Ave., Brooklyn 24, N. Y.

Beginning Writers: Get $1 to $20 checks daily writing simple children's stories, articles, poetry in your spare time. Experience unnecessary. Our instructions reveal how. Details FREE. W. Herman, 7016 Euclid, Cleveland 3, Ohio.

MISS VFW TENNESSEE. Pretty southern miss, bewitching in a bikini. Six 4 x 5 glossies $1.00. 15—$2.00. Oakley & Wootten, Gallatin, Tennessee.

FOREIGN FILM PROCESSED. GEN-PHOTO, 138 CHARLES ST., BOSTON 14, MASS.

BIKINI'S. TERRIFIC PIN-UP COSTUMES!! Actual-Photo 1954 CALENDAR of 12 New Pin-up Costumes—$2.00. Unique and Beautiful. This is posed by BARBARA OSTERMAN! Costumes priced reasonable. ACTUAL-PHOTO CATALOGS, BIKINI—50c, LINGERIE—50c. Portrait Drape. Literature Free. Air-Mail, Calendar 12c, others 6c each. Maureen of Hollywood, 140 So. Alvarado, Los Angeles 57, Calif.

June, the perfect English model. Three superb studies, $1.00 Mountview Studio, 63, Glasslyn Road, London, N. 8, England.

New, Informative, Educational, Travelogue "Chicagoland Views" Exclusive for 8mm Viewers. Write for Literature, Town House Recordings, 14530 Parnell Avenue, Riverdale 27, Illinois.

GLAMOUR GIRLS. Strictly Amateur posed in latest swim suits. 10 for $1.00. Glossy 8 x 10 free. Wineholt, Woodbine 34, Penna.

PIN UP SLIDES Different. Send $1.00 for 3 and catalog. Wineholt Co., Woodbine 34, Penna.

POSTCARDS printed in natural color from your transparencies. Excellent for scenic views or advertising cards. Write Colorart, 475 Fifth Avenue, New York.

Glamourous figure studies. Full color transparencies of beautiful models. Stereo and 120 transparencies. 2 for $3.00; 35mm, 3 for $1.00. KOLOSTEREO, Box 745, Church Street Station, New York 8, N. Y.

ART MODEL playing cards. The stag deck you've heard about, $2.00. Lensart, Box 1215A, Dothan, Ala.

MODEL RELEASE FORMS. Protects you from legal trouble. 25¢ for a pad of 25. Limit 4 to a customer. MODERN PHOTOGRAPHY, 251 Fourth Avenue, New York, N. Y.

stereo photography

STEREO SLIDES GALORE!!!! ACADEMY AWARD WINNERS—The 10 best from worldwide contest each year, both 1951 & 1952 sets available, $3.95 per set. Money back guarantee stereo viewer $2.95. Also big selection scenic stereo slides as low as 100 for $27.50. Send 25c for catalog and sample slide. Horner-Cooley Productions, Inc., 6112 Selma Avenue, Hollywood 28, Calif.

APPROVALS! Grand Canyon; Stereo and 2 x 2; also other Western attractions. J. DuBois, 5864 Hollywood, Hollywood 28, Calif.

Beautiful Stereo-Realist Color slides, 5 for $1.00. Stereo viewer $2.95. Single slides 10 for $1.00. Grand Canyon; Zion and Bryce Canyons; Yosemite. FRIEDELL, Fox-Oakland Building, Oakland 12, California.

STEREO—Miss Universe Beauty Pageant, genuine Kodachrome—12, $9.00; 24, $16.50; 36, $22.50; free viewer. Perry Griffith, 225 E. 6th, Long Beach, Calif.

TRICK STEREO KIT now available for your Stereo-Realist. Make your own strange illusions in 3-D. Multiple exposures, space control, etc. Write for FREE illustrated folder. H. Powers Co., 6411 S. Canterbury Rd., Dept. B., Cleveland, Ohio.

3-D Stereo kit complete with Camera and Viewer, Exposure Guide, Twin-Ray Lens, Illustrated Instructions. Assemble yourself, save plenty! Rush name, pay postman only $7.95 plus C.O.D. charge. Spicer Art, P. O. Box 551, Cincinnati 1, Ohio.

STEREO BARGAINS—Realist Viewer Reg. $9.50, now only $6.95—Original Model Slides, complete selection 6 for $3.00, 12 for $5.00—Stereo Viewer Only $1.00—Telephoto Lenses, New (pr.) for Realist only $29.95. Send 10c for illustrated catalog of "everything stereo". STEREOMART, Dept. MC, 2057 Coney Island Ave., Brooklyn, N. Y.

Beautiful stereo figure studies. Single and groups. Glass mounted original Kodachromes. 2 for three dollars. Sample $1.75. Dolores Stereo, 105 West 63 St., N. Y. 23, N. Y.

oil coloring

Oil coloring photographs can be a fascinating hobby or profitable sideline for those with artistic talent. Learn at home. Easy simplified method. Send for free booklet. National Photo Coloring School, 835 Diversey Parkway, Dept. 1112, Chicago 14, Illinois.

books and magazines

WHERE AND HOW TO SELL YOUR PICTURES, contains a completely up-to-date and *VERIFIED* listing of over 800 names and addresses of purchasers of salable photographs; also information on what editors want to buy, how to submit by mail, photo agencies, model releases, how to find unlisted markets, how to query, how to copyright, assignments, the publishing rights you sell, how to meet name competition, etc. Send $1.50 (add 3% sales tax for New York City delivery) to Modern's Book Store, 251 4th Ave., New York 10, N. Y.

HOW TO PHOTOGRAPH WOMEN by Peter Gowland, world famous photographer. Contains 140 pages with over 200 art and pin-up photos. $1.00 postpaid. Oakley & Wootten, Gallatin, Tenn.

LEARN RETOUCHING. MAKE MORE MONEY! 70 page illustrated book shows you how to do complete Retouching. Paper negatives included. Refund Guaranteed. Send $1.95 to DeGore Photo Plaque Co., Dept. XM, 3723 Fullerton Ave., Chicago 47, Illinois.

business opportunities

INCREASE INCOME $1000 to $4000 yearly. Tested promotional ideas for studios, professional photographers. Logan, Box 118, Independence, Missouri.

Earn $15,000-$30,000 annually. Franchise protected. Guaranteed minimum $12,500 or money back. Live at home. No merchandise to buy. Self-employed. One of most exclusive and noncompetitive businesses in United States and Canada. Send 50c for explanatory book. Money refunded when book returned. Harrell & Company, Box A-19, Louisville, Illinois.

Buy wholesale 25,000 items catalogue 25c. Matthews, 1474-B3, Broadway, N. Y. C.

Be our Representative. Franchise protected. We send you free a DEMONSTRATING MODEL and complete instructions, you send us $1.00 to cover handling. Mirasola Exposure Calculators, AE 254 W. Cottage Pl., York, Pa.

Buy Wholesale Direct. Name Brand Appliances, Giftware, watches, etc. Pagoda, 949 Grand Ave., New Haven, Conn.

schools and instructions

Oil coloring photographs can be a fascinating hobby or profitable sideline for those with artistic talent. Learn at home. Easy simplified method. Send for free booklet. National Photo Coloring School, 835 Diversey Parkway, Dept. 2122, Chicago 14, Illinois.

Learn Airbrush Retouching at home. Excellent Pay. Free book M. New York Correspondence School, 341 Bridge Street, Brooklyn, New York.

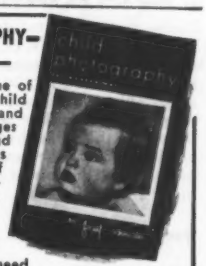
Lens Optics Simplified complete course. Know your lens. Write for information. Photo Publications, Dept A., Reseda, California.

PORTRAITURE

15 famous portraitists show you how to use backgrounds and lights; take heads or full-lengths; high key and glamour; stout or thin subjects; take children's pictures; home and studio shots. 250 illustrations—192 pgs.—a full course. Only $3.50. See your dealer or write.

American Photographic Book Pub. Co., Inc.
251 4th Ave., New York 10, N. Y.

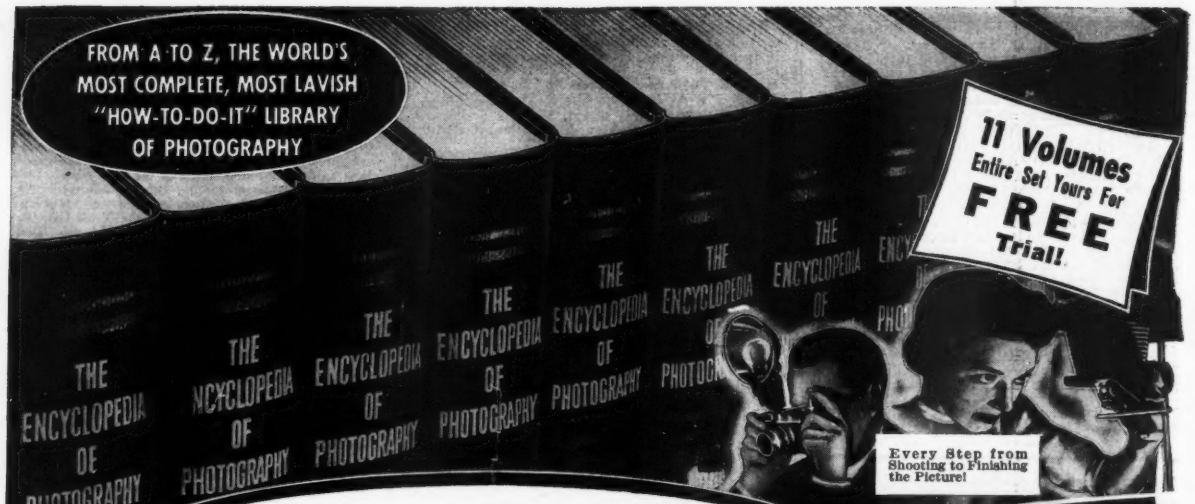
CHILD PHOTOGRAPHY—
The Modern Way—



by Josef Schneider, one of the Country's leading child photographers. Tells and shows you in 208 pages and 275 illustrations and diagrams, all the tricks that get best pictures of little folks—tots to 'teenagers. Gives priceless information on most effective use of flood, flash and speedlights for black and white and color. All you ever need to know to take really fine pictures of children..... **$4.95**

Add 3% sales tax for New York City delivery

American Photographic Pub. Co., Inc.
251 4th Avenue, New York 10, N. Y.



Brand New—Covering Every Phase of Picture Making for Amateur and Professional!

ENCYCLOPEDIA OF PHOTOGRAPHY

Over 4,300 Big 7" x 10" Pages . . . Over 9,300 Pictures Including Full Color and Photogravure Plates!

Prepared by 250 Famous Picture Specialists

"Slugfest." Carl Thusgaard of Acme used ringlights, slow shutter, to capture dramatic motion.

How to shoot for top Human Interest, as in this Eastman Kodatron lighted subject by Frank Bauman of **Look.**

AS NECESSARY as your camera and darkroom—this New, Revised, Enlarged Edition of the most comprehensive, up-to-date, How-to-Do-It Reference Encyclopedia and Self-Instruction Course in Photography ever published! It's greater than ever! So elaborate, so costly to produce, that we have to limit the size of each printing carefully! Whether you are beginner, advanced amateur or professional, you will find in these books the most up-to-date answers to your questions about all branches of photography—from the planning of pictures to finishing. They will show you how to get more perfect results from your camera and darkroom equipment; give you thousands of new ideas that will make your photography more PLEASURABLE and more PROFITABLE!

Here Is Just a Partial List of Over 2100 Units of PRACTICAL How-to-Do-It Instructions:

Action Subjects
Advertising Photography
Animal Photography
Art in Photography
Artificial Light
Bird Photography
Bromide Printing and Enlarging
Cameras and Accessories
Candid Photos
Careers in Photography
Cinematography 8mm and 16mm
Color Photography
Color Printing
Commercial Photography
Developers and Developing
Darkroom Built by Yourself
Electronic Flash Lighting
Enlarging
Exposure
Flashlight
Free-Lancing
High Speed Techniques
Infrared Photography
Kodachrome
Lighting
Landscapes
Law and the Photographer
Markets for Photographs
Medical Photos
Miniature Cameras
Newspaper Photography
Night Photography
Nude Photography
Photomontage
Polarized Light
Portraiture
Printing
Retouching
Rodeo Photography
Sports Photos
Stage Photography
Still Projection
Studio Arrangement
Table-Top Photos
Television
Toning Processes
Trick Photography
Visual Teaching
X-Ray Photos
and hundreds of other subjects covering every up-to-date development in photography

How to make Glamor Shots Summer and Winter, as in this fine example by Fritz Henle.

MAIL FREE-TRIAL COUPON *TODAY!*

NATIONAL EDUCATIONAL ALLIANCE, INC.
37 West 47th St., New York 36, N. Y.

Please reserve for me, for a week's FREE enjoyment, a set of the new 11-volume ENCYCLOPEDIA OF PHOTOGRAPHY, in De Luxe Binding of genuine Emerald Green Morocco Grained BUCKRAM, embossed in 23-KARAT GOLD. Notify me when the books are ready to ship and I will send only $1 deposit. On receipt of it ship me the complete set prepaid for a week's free enjoyment. At the end of that time, I will either return the set and you will refund my $1; or I will keep the set and will start then to remit $5 each month until the low price of $55 plus postage is paid. (Cash-with-order Price only $50.)

Name 126

Address 12812A

City & Zone ..... State .....

SAVE SHIPPING CHARGES ON 29-LB. SHIPMENT. Enclose $1 deposit now and we stand all packing, shipping and insurance charges. Same return privilege.
In Canada, mail to McAINSH & CO., Toronto

10,000 Items of Information Including Newest Equipment, Newest Methods, Newest Processes!

THINK of having the help and advice of over 250 experts such as Willard D. Morgan, John F. O'Reilly, Walt Disney, Paul Outerbridge, Margaret Bourke-White, Ansel Adams, H. R. Rockwell, Jr., Julien Bryan, Dmitri Kessel, technicians from Eastman Kodak, Ansco, Leitz, Bell & Howell, Zeiss, Bausch and Lomb, General Electric!

Over 2,100 units of instruction cover EVERY kind of camera accessory and equipment! Still and Action Pictures, Black and White and Color Work, Silent and Sound Movies! The latest methods of lighting, exposure, development, printing, enlarging! Every division of photography such as Portraiture, Theatre Work, Press Pictures, Advertising, Nature, Wild Life, etc.!

Hundreds of up-to-date revisions throughout, PLUS an entirely NEW giant volume of 396 pages, and a completely revised index volume. Over 9,300 pictures by over 1,500 photographers! Over 500 Full Tone photogravure and FULL COLOR photographs! More than 1,000 instructive line drawings! Over 7,700 delicately etched 150-screen black and white halftones! All on finest quality coated paper to retain every fine detail. Bound in beautiful Emerald Green Morocco-Grained BUCKRAM! Ornamented in GENUINE 23-KARAT GOLD.

Mail Coupon for FREE Trial!

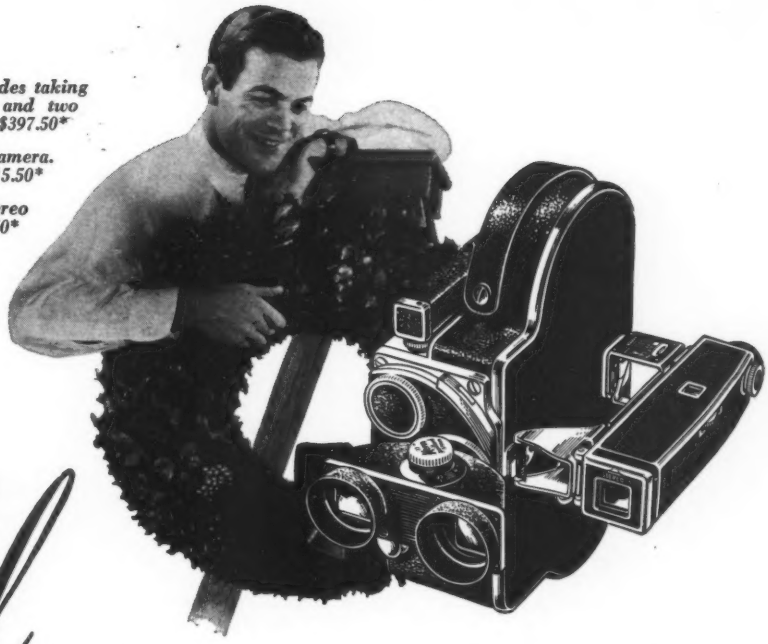
Enjoy 11 magnificent volumes a week FREE. If not delighted, return and owe nothing. Otherwise remit amazingly low price in easy installments. Sets limited. Mail reservation coupon **NOW!**

THE NATIONAL EDUCATIONAL ALLIANCE, INC.
37 W. 47th ST., NEW YORK 36, N. Y.

The Bolex Stereo System includes taking and projecting lenses, screen, and two pairs of Polaroid glasses. *$397.50**

Complete with Bolex H-16 DeLuxe camera. *$715.50**

Stereo Close-up device permits true stereo close-ups. *$67.50**



3-d or 2-d Movies for Christmas? Bolex offers both

No matter who it is you're camera-shopping for, Bolex is the surest-to-please camera you can give. Is it someone who wants thrilling 3-D today? Bolex brings it to them with Hollywood quality.

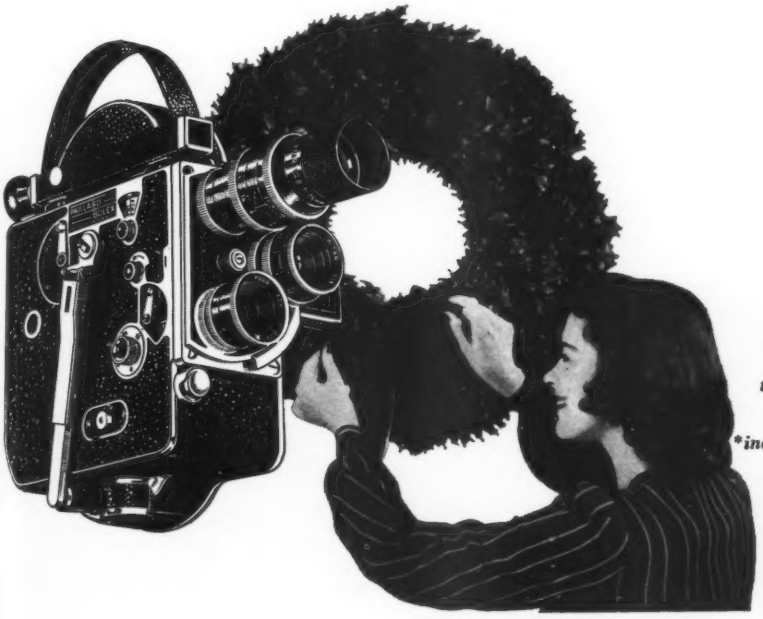
Is it someone who wants the ultimate in *2-D* now, with easy conversion to *3-D* later on? Again, give Bolex.

Give Bolex and you give such appreciated features as automatic threading, full eye-level focusing, unlimited forward and reverse hand winding . . . all of them *Bolex exclusives*, every one. They've made Bolex the camera most wanted by serious movie-makers. They've helped Bolex win 1953's top filming awards around the world. They'll rate *you* as No. 1 Santa with anyone who's hoping for a camera!

Bolex owners . . . receive regular free mailings of Bolex Reporter by registering serial numbers. Offer applies only to residents of U.S.A. Overseas subscriptions, $3.00 four issues.

Paillard Products, Inc., 100 Sixth Ave., New York 13, N. Y.
Outside U.S.A. write to Paillard, S. A. Ste. Croix, Switzerland.

Enjoy the finest in 16mm Christmas Movie Making with



Bolex®

Bolex H-16 DeLuxe camera. Octameter finder gives automatic field of view for all lenses from 16mm to 6" telephoto. Eye level focus, automatic threading, footage counter, audible indicator, "C" mount turret. With Switar 25mm F:1.4 Kern lens. *$496.50**

**includes F. E. T.*

Ever thread a rainbow through a needle?

That's what the lens designer must do, when he sits down with computing apparatus and a stack of optical glass specifications.

Light is stubborn stuff, and a good, sharp, fast lens is a mathematical battle against stiff odds. Red, green, and blue rays must be forced to behave; dozens of optical errors and aberrations must be squeezed out; exact types and shapes of optical glass must be expertly combined.

If the designer is tops in his field, he can give you a lens such as the superb Kodak Ektar *f*/3.5 on this Kodak Signet 35 Camera.

From that point, it is the camera designer's problem. He must create a camera that lives up to the lens, that has all the mechanical precision and operating refinements a great lens demands. And if *he* is tops in *his* field, he can give you a camera such as the incomparable Kodak Signet 35—for only $92.50!

That's what the film designer must do, when he begins the long research and pilot production that precede a successful color film.

Part of his job is to prevent coarse grain and "wandering" of dyes in the emulsion, so that the needle-sharp detail delivered by a fine lens is not lost in the film. He must also achieve good film speed, reliable balance in each color, reliable film life, reliable processing response—in short, a film that's reliable in every detail.

And if *he* is tops in *his* field, he can give you a film as well-balanced and dependable as Kodachrome Film. And as thrifty—8 shots for $1.88, 20 for $3.50, 36 for $5.50, including processing and mounting!

Lens designer, camera designer, film designer—it takes all three, and all three must be good, to help you "thread a rainbow through a needle"—and save you money, too!

Prices include Federal Tax and are subject to change without notice.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

KODAK COMMERCIAL, WIDE FIELD, PROCESS, ENLARGING, AND PROJECTION [illegible] ES . . . KODAK EKTANON LENSES . . . KODAK SIGNET, RETINA, AND PONY CAMERAS . . . KODACHROME AND KODACOLOR FILMS . . . KODAK EKTACHROME FILM, ROLL AND SHEET . . . KODAK FLEXICHROME AND DYE TRANSFER MATERIALS . . . KODAK COLOR FILTERS . . . KODASLIDE VIEWERS AND PROJECTORS . . . KODAK DATA BOOKS AND COLOR HANDBOOK. SEE YOUR KODAK DEALER.

Kodak
TRADE-MARK